Event24x7

Management System

User Manual

Version 8.1.05

TriggerPlus Software Ltd.

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1. Introduction

1.1 TriggerPlus Software

TriggerPlus is a leading global provider of automated monitoring and management solutions and pioneered the development of an agentless solution for managing and controlling heterogeneous environments.

Headquartered in Israel, TriggerPlus is a Independent Software Vendor (ISV) established by a team of experts in the field of enterprise systems management, and the company's R&D team consists of veterans of the systems-management space. TriggerPlus boasts a large customer base in both the SME and OEM markets.

1.2 TriggerPlus Vision

To provide the best, easy to implement, use and maintain solution for manage and control business processes in heterogeneous environments.

1.3 What is Event24x7?

Event24x7 is a state of the art Monitoring and Event Management solution that provides a new concept for managing heterogeneous environments. Event24x7 automatically monitors and manages the entire data center to ensure system's availability.

Event 24x7 main advantages

- ✓ **Simplicity**
  - ❖ **Robust easy to use MMI (Men Machine Interface)**
  - ❖ **Requires no programming**
  - ❖ **Fill-In-The-Blanks Approach**
  - ❖ **Agent less - centralize implementation**
- ✓ **Staging Area**
  - ❖ **Unique capabilities of Root Cause Analysis and Eliminating "White noises"**
- ✓ **Active - Not Reactive**
  - ❖ **Solves issues before they become problems**

- ✓ **Operate remotely**
  - ❖ **Performs remotely as local operator**

- ✓ **Open Environment**
  - ❖ **Easily Customized to customer's specific needs**

- ✓ **Scalable**
  - ❖ **Handles large number of elements and events**
  - ❖ **Handles large number of rules**
  - ❖ **Cluster capability**

- ✓ **Out-Of-The-Box pre-defined solutions**
  - ❖ **Numerous environments (Windows, Unix, Linux)**
  - ❖ **Numerous Data bases (oracle, SQL, MySQL, Informix)**
  - ❖ **Numerous Network elements (Switches, Bridges)**

- ✓ **Service oriented architecture**
  - ❖ **Business Processes Trees**
  - ❖ **Dependences Trees**

- ✓ **3D Monitoring Architecture**
  - ❖ **Vertical Axis (Physical Structure) – Servers, Networking objects, Databases, etc. Use File Watch, Manage by Exception, ProActive and IB (Agents) monitoring methods to monitor and perform automatic actions.**

  - ❖ **Horizontal Axis (Virtual Structure) – A View that contains a group of monitored objects (from the physical structure). Perform actions when Service state changed. Might be on any one of the Service components: Session, Monitor and Parameter.**

  - ❖ **Depth Axis – Staging Area – Use hierarchy definition inside a group of monitored objects to verify the root cause analysis, to avoid false alarms and provide pinpointed information about the problem.**

- ✓ **Skeletons**
  - ❖ **Changing the skeleton (on every level) will automatically change the session definition belongs to the skeleton.**

- ✓ **User Experience**
  - ❖ **Record scenarios of user actions on websites or local programs and let Event24x7 to run them automatically according to schedule. Check if a complete recorded process is ok, measure**

times of webpages, and get the result back in the Event24x7 for analysis and alerts.

- ✓ **Notification Center (Handling problem assurance)**
  - ❖ **Pick up operator according to weekly duties and wait for acknowledgment that the problem was assigned to operator.**

- ✓ **Handling Down Time**
  - ❖ **Define down time for maintenance and Event24x7 will not send alerts during this period.**

- ✓ **Live Diagrams**
  - ❖ **Onboard and easy to use, diagram creator for each organization to create its own diagrams and maps. Each object in the diagram can become alive and get automatic color according to its state, simply by connecting it to a monitored object. Hierarchic structure of diagrams can be created with the option to jump from one diagram to the other by clicking an object.**

- ✓ **Web Layer**
  - ❖ **Event24x7-Web layer is the web interface of Event24x7 System. Event24x7-Web provides operational view of the system's status. It includes a dashboard, charts, reports and a rotational view of selected pages.**

1.4 Mode of Operations

Two engines works in parallel mode

- ✓ **Manage by Exception**
  User Defined Rules
  - ❖ Automatically read from organization's data sources
  - ❖ Evaluates events by organization Rules
  - ❖ Triggered actions to resolve the problems

  - ➢ **Manage by Exception Approach**

    Event24x7 has the ability to read from various sources such as UNIX, Windows, log files, SNMP Traps, TCP/IP packets, electronic devices, etc. and to act in case of problems according to powerful user definable rules.
    When Event24x7 identifies that a problem occurs it notifies the operator and tries automatically to solve the problem. Event24x7 has similar capabilities to cure the problem remotely as an operator working locally on the console. When human intervention is required, it would notify the designated persons by pager, voice mail or other means. Event24x7 would continue to monitor the problem until it is solved.

- ✓ **Pro Active Approach**
  State Machine mechanism
  - ❖ Consistently checks the environment (Objects)
  - ❖ Set a State to every monitored Object according to user define thresholds
  - ❖ Act to change Object State from Current to Desire state
  - ❖ Report status

  - ➢ **State Machine mechanism for Pro-active approach**

    The idea is not to wait for problems to become a show stopper, but consistently check the environment and cure whatever has a potential to become a severe problem.

    Event24x7 evaluates the state of every component it monitors. Components may be every object which exists in the computer: system parts like services, memory, paging, CPU etc. and business application aspects.
    Each component's state evaluation is done according to a user defined threshold. When a state of an object is not OK, Event24x7 tries to change the object state back to normal and by that to prevent it from escalating.

The Performance feature is based upon three objects: Monitor, Collector and Parameter. Monitor is the container of Event24x7 pro-active activities.

Each Collector performs single query or operation against the target machine or application on the target machine.

Parameter defines the state of the monitored object. First, it takes the result of the Collector activity and creates a new value. Second, this value is analyzed according to a set of threshold values. According to the threshold, the state of the monitored object is defined.

The Monitor, Collector and Parameters objects together provide the ability to monitor and handle the IT environment by a state machine. It defines the state of any monitored object in this environment, and uses a set of activities in order to return the state to the required one.

1.5 Business Process Control

- ✓ Monitor the organization's Business Processes
  - ❖ Link monitored object to Process or Processes
  - ❖ Monitor the entire (End to End) Processes
  - ❖ In cases of malfunction:
    - ➢ Identify the root causes (**Root cause analysis)**
    - ➢ Try to cure the damaged object based on pre-defined rules
    - ➢ Try to find a workaround based on pre-defined rules

1.6 Event24x7 Physical Architecture

Event24x7 solution is defined as Client/Server architecture and is composed of the following components:

- The **Central Event Server (CES)** is the heart of the product. It is Windows based core software that provides enterprise wide information and control. The role of the CES is to be “the manager of the managers".

- The **Distributed Event Server (DES)** has similar functionalities as the CES. It reduces the load from the Central Event Server (CES) by handling the session's traffic, and performing initial rule processing and message suppression. The DES part enables the clustering support.

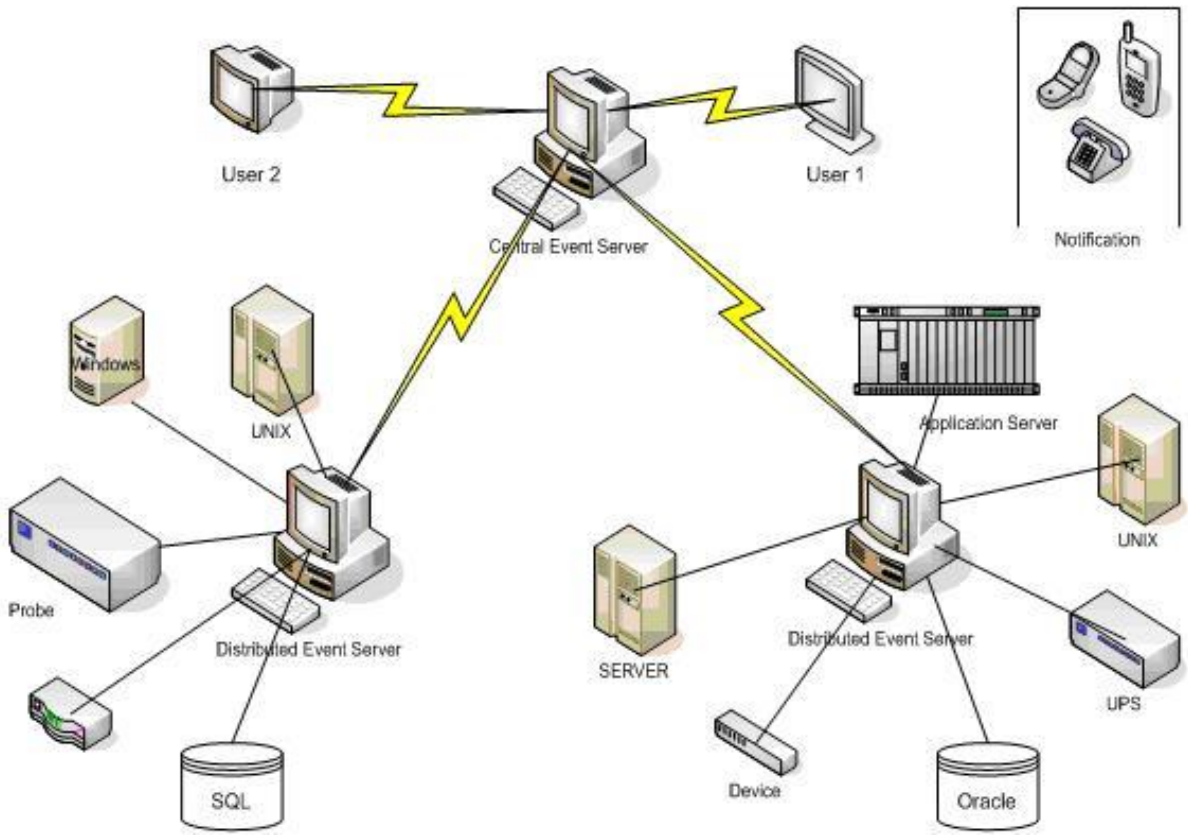
- The **Remote Event Server (RES)** is a Smart Agent. It is platform specific software that probes and controls critical systems.

- The **User Experience (UES)**. It is capable of simulates any end user activities and measure the results. The activities can be browsing web pages or any other clients programs.

- The **Watchdog Event Server (WES)** is responsible to keep the services of Event24x7 up and running. It checks on the status of the installed services (can be any combination of the 1st three) and as soon as one is down it starts it up again.

- Multiple Control and Management GUIs.

All five components (CES, DES, RES, UES and WES) are installed as services.
Event24x7 solution contains a single CES, a single WES and at least a single DES. If required, more DES can be installed on separate machines. However, in most cases a single DES that is installed at the same machine with the CES is more than enough to handle all of the site's needs.
RES is optional and installed only when there is a need for a local agent to run on a specific Windows platform.



Why we might consider using more than one single DES?

The reasons are security consideration and performance. In situations that there are several segments in site network, we might install one DES in each segment. Each DES handles all the computers in that segment and reports to the same CES.

Another possibility is performance and scalability. If for example, Event24x7 monitored two remote environments. It is wiser to install two DES, one at each region. Each one handles all the computers in its region. In this way there is no need to send everything to the CES over the network. The job is done locally at the DES level. Besides the performance issue, this solution has another important advantage of surviving. DES can continue to operate even when the connection to the CES is lost.

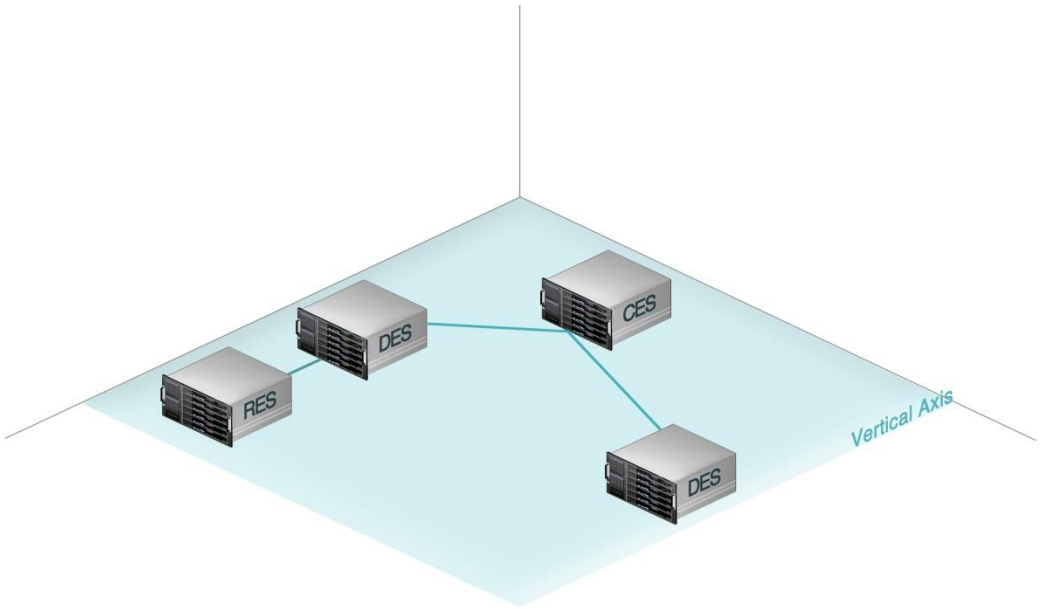
It is preferred that all message processing will be done locally at the DES level rules; therefore messages are not forwarded from DES to CES rule processing system by default. Rule processing on CES should be reserved to messages and events that need a global view of the managed environments. In order to achieve this functionality, Event24x7 provides a special DES to CES event mechanism: overriding the message being forwarded and suppressing unnecessary messages at the rule and session levels.

1.7 Event24x7 Monitoring Architecture

Event24x7 solution provides 3D monitoring architecture by having monitoring definitions at all three dimensions. It increases productivity by easily defining sophisticated monitoring statements at every point along the flow of the monitored object.

1.7.1 Vertical Axis (Physical Structure)

Fundamental capabilities of Event24x7 to monitor the entire environment like: Servers, Networking objects, Databases, etc. Use File Watch, Manage by Exception, Pro-Active and IB (Agents) monitoring methods to monitor and perform automatic actions.

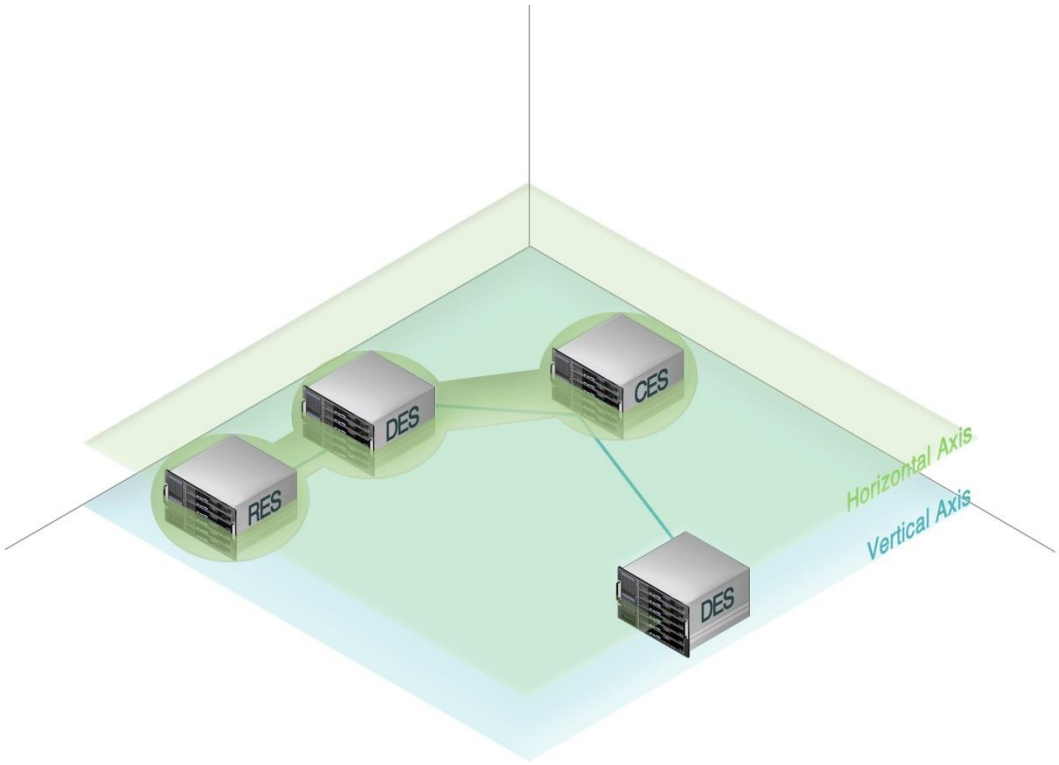


Every Event24x7's component has unique monitoring tools:

Element	Monitoring	
CES	Rules	Manages events coming from all DESs. Use also as scheduler that distributes commands among DESs.
DES	Monitoring Definition	Sophisticated state of the art monitoring tools that Contains the File Watch, Manage by Exception and Pro-Active approaches.
RES	IB Session	Execute locally at the target machine. Performs actions locally and send the results to DES.

1.7.2 Horizontal Axis (Virtual Structure)

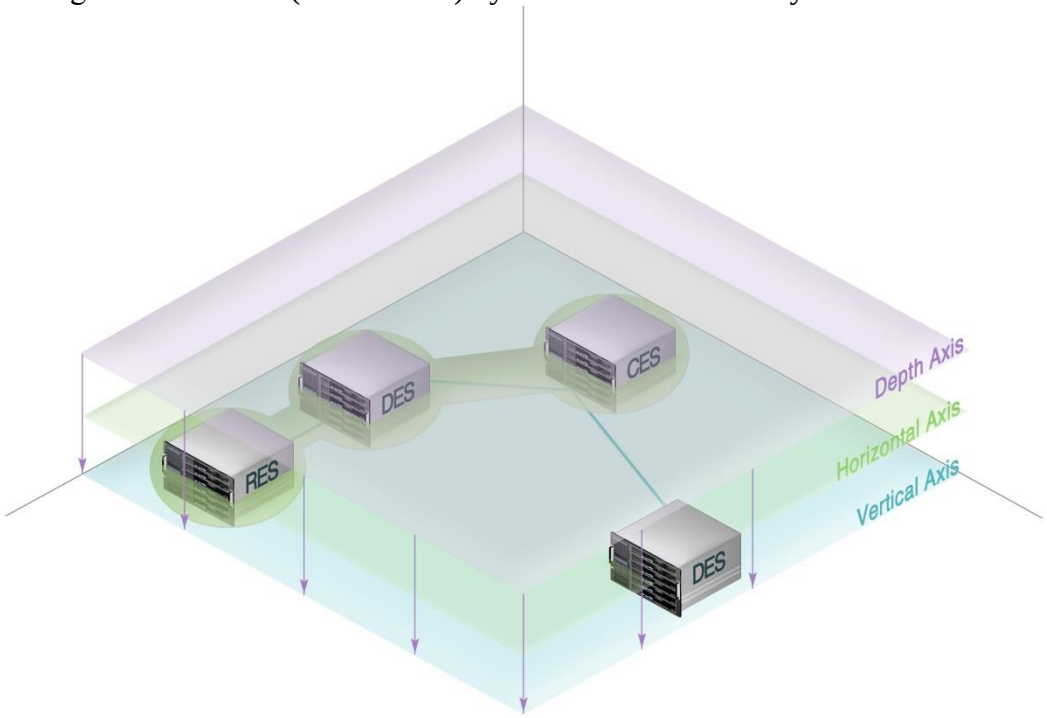
Event24x7 Service is actually a way to create views. View is sub set of sessions and monitors (from the physical structure) that has common denominator.



Element	Monitoring	
Service	Rule Service	Perform actions when Service state changed. The Rule Service let you intercept a change at any level of the service's component: Service, Session, Monitor and Parameter.

1.7.3 Depth Axis – Staging Area

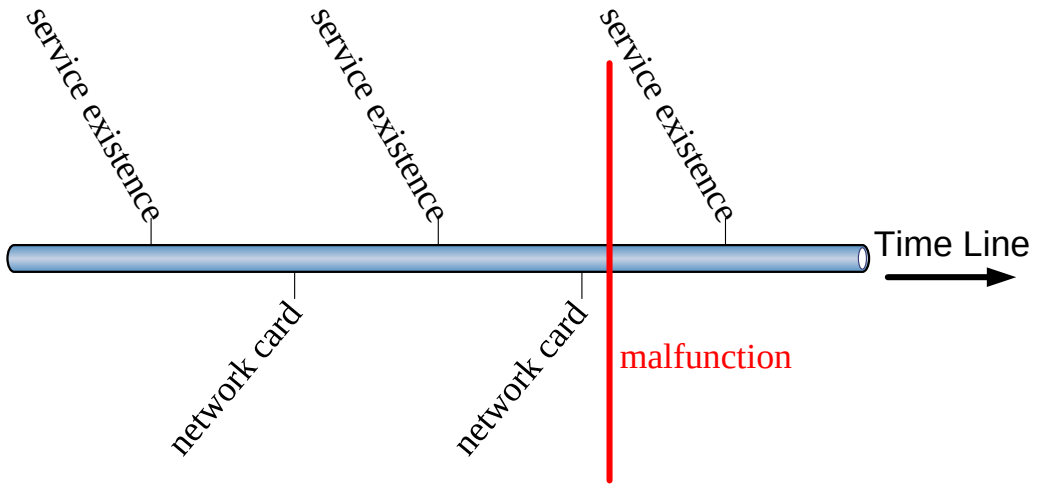
Staging Area is a new layer on top of the monitoring environment. It provides unique capabilities of eliminating “white noises” (false alarms) by true Root Cause Analysis assurance.



When Parameter state changes the Parameter’s action statements executes immediately. The Staging Area is new method to defer the execution. In this stage Event24x4 verify the state of the Parameter’s ancestors. It might force execution of the ancestors in order to get their updated state. When one of the ancestors has error state it means that the problem is not at the tested Parameter but higher in the hierarchy. Therefore, the only action for the higher parameters will be executed.

In order to explain the behavior of the Staging Area, let's presume a two level connection.

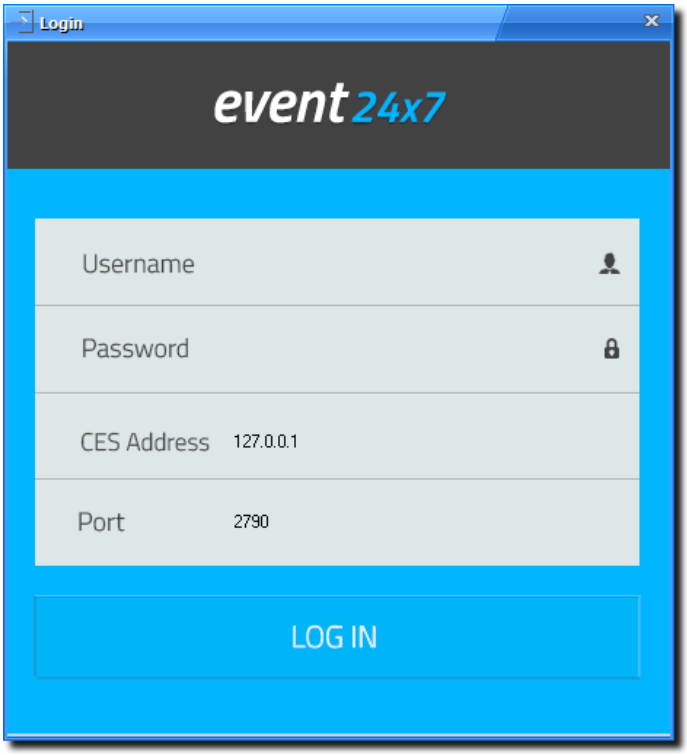
We have a test for a service existence which depends on the availability of the network card. The network card test was OK. After 10 seconds, the test of the service existence failed. Everyone else will shout on Severe state at the service existence test. In fact, the problem did not occurred due to the service not running but it occurred because five seconds earlier the network itself had a malfunction. Event24x7 has a unique Staging Area module to handle it. On the first step, the Staging Area will verify what the current status of the network test. After finding out that the problem is at the network level it will eliminate the action items for the service existence test, while leaving only the action items for the network card.



2. Starting Event24x7

2.1 Login Dialog

Start Event24x7. The Login screen will pop up.



The Login Dialog is used to authenticate user to Event24x7.

⏩ After installing Event24x7, the default user and password for login are:

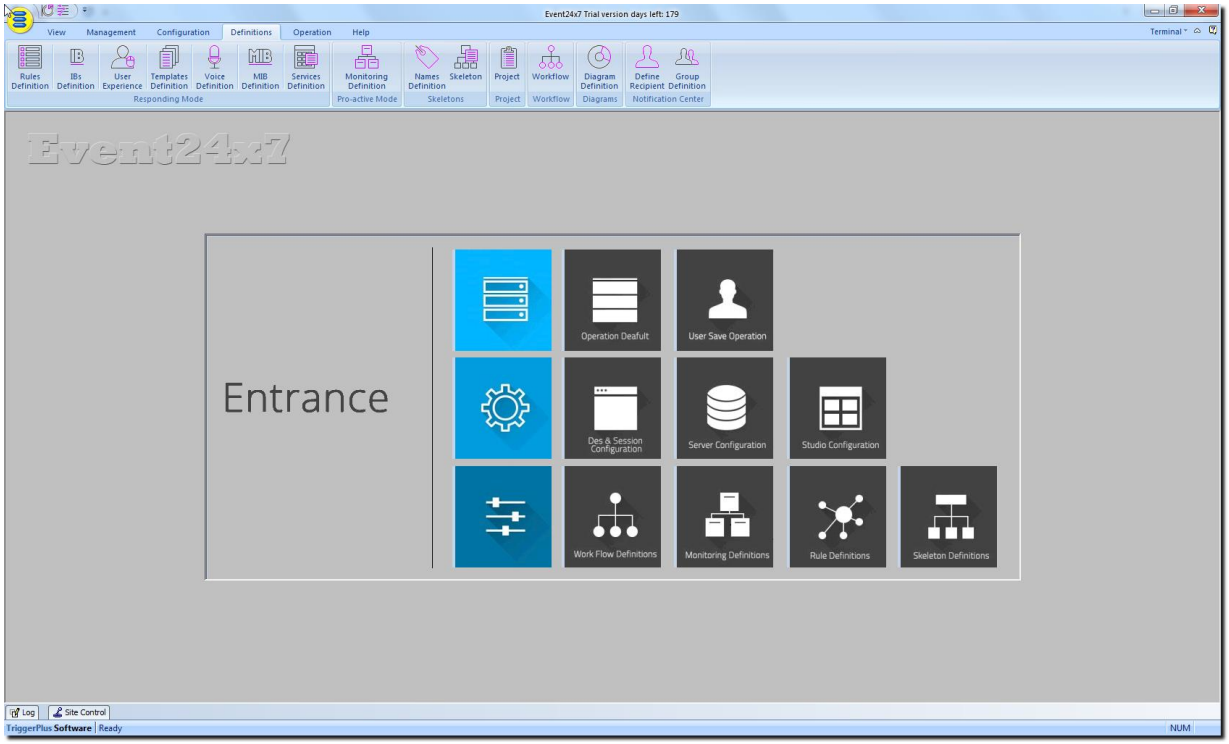
User Name event
Password event

For better security, please change the default user and password.

The default connection parameters between the Event24x7 Central Event Server (CES) and the EventStudio (GUI) are TCPIP with 127.0.0.1 address.
Changing the default is done by the Setup program.

2.2 Event24x7 Studio

Following a successful login the Event24x7 Studio screen will open.
The user will be able to work on Event24x7 according to pre-set permissions.
Actions that the user may not access will be grayed in.



2.3 Event24x7 Navigation

There are several ways to navigate between the various Event24x7 screens.

- **Entry Screen**
  Select an option from the entry screen to navigate directly to the desired screen.

- **Menu & Toolbar**
  Traditional Menu and Toolbar at the top of the Event24x7 screen.

3. Configuration

The configuration process employs a series of screens that establish the Event24x7 framework. These screens include:

- Distributed Event Servers (DES) and Sessions
- Service
- Users
- Profile
- Tables (including Credential)
- Downtime
- Server
- Studio
- Disable Notification

The configuration group can be pulled down from the Configuration Menu at the top of the Studio screen. The Server, Sessions, Users, and Profile screens can also be accessed using the Studio icons.

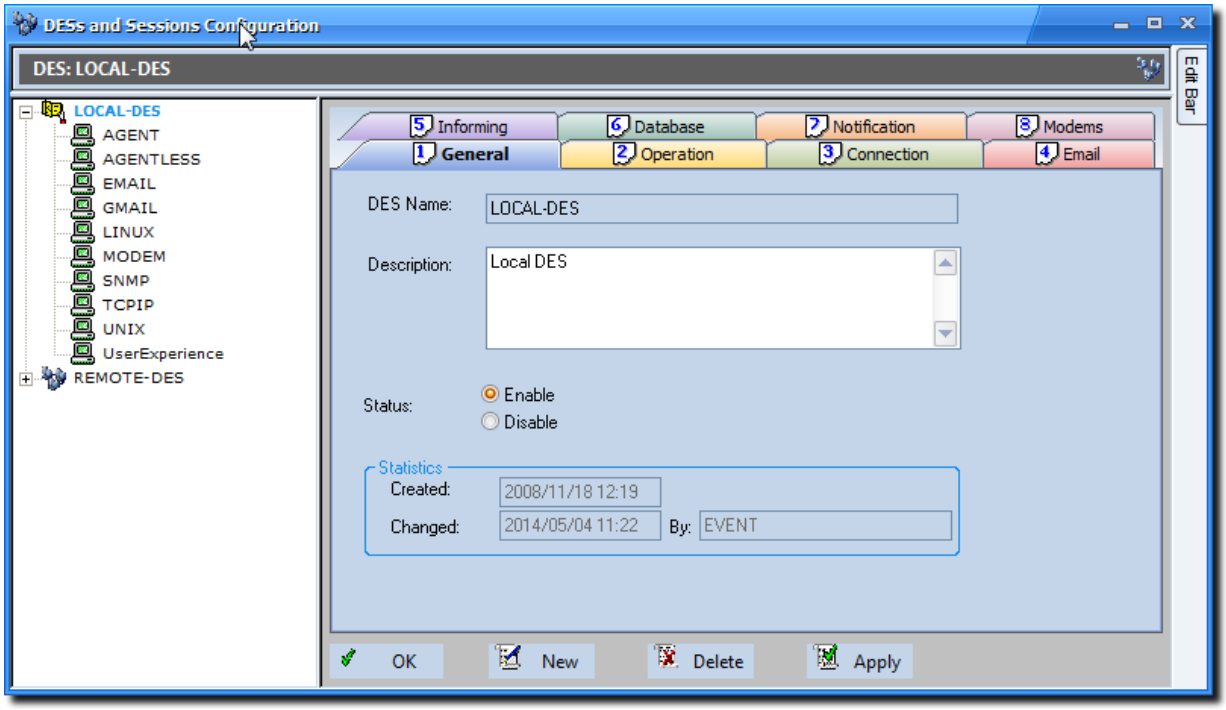
Session is Event24x7 terminology for every computer or programmable device that Event24x7 will monitor.

A session should be defined for every remote computer or programmable device that Event24x7 will manage or monitor.

DES is container of Sessions. Every DES has a list of related Sessions. Defining DES is for advanced users. Using single DES is enough for most of the cases.
DES handles the scalabilities option of Event24x7. It runs the Pro-Active engine. In cases that your network contains clusters of remote braches you can define a separate DES for each one of the clusters.

3.1 DESs and Sessions Configuration

The relation between DES and Sessions is 1-N. The configuration screen has a tree structure. Every DES at the top level has all its related sessions below.

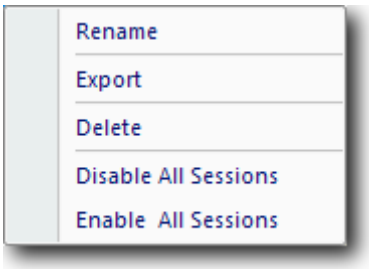


The configuration screen left pane contains the DES's list and its Sessions. The right pane of the screen defines the highlighted DES or Session's parameters.

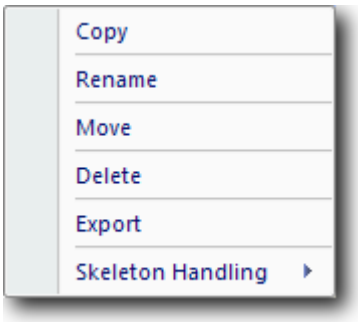
3.1.1 Actions on left pane

Selecting an object (Des or Session) and pressing the right mouse will open a pop-up window with the DES or Session actions.

DES menu:

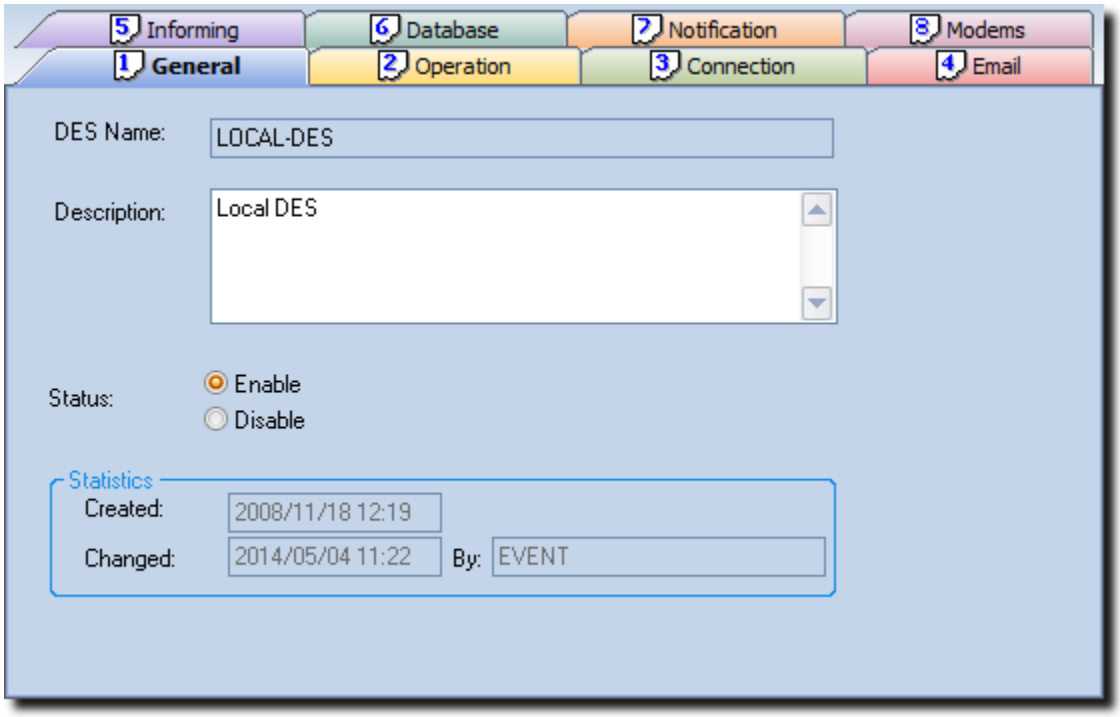


Session menu:



3.1.2 DES configuration

3.1.2.1 General Tab



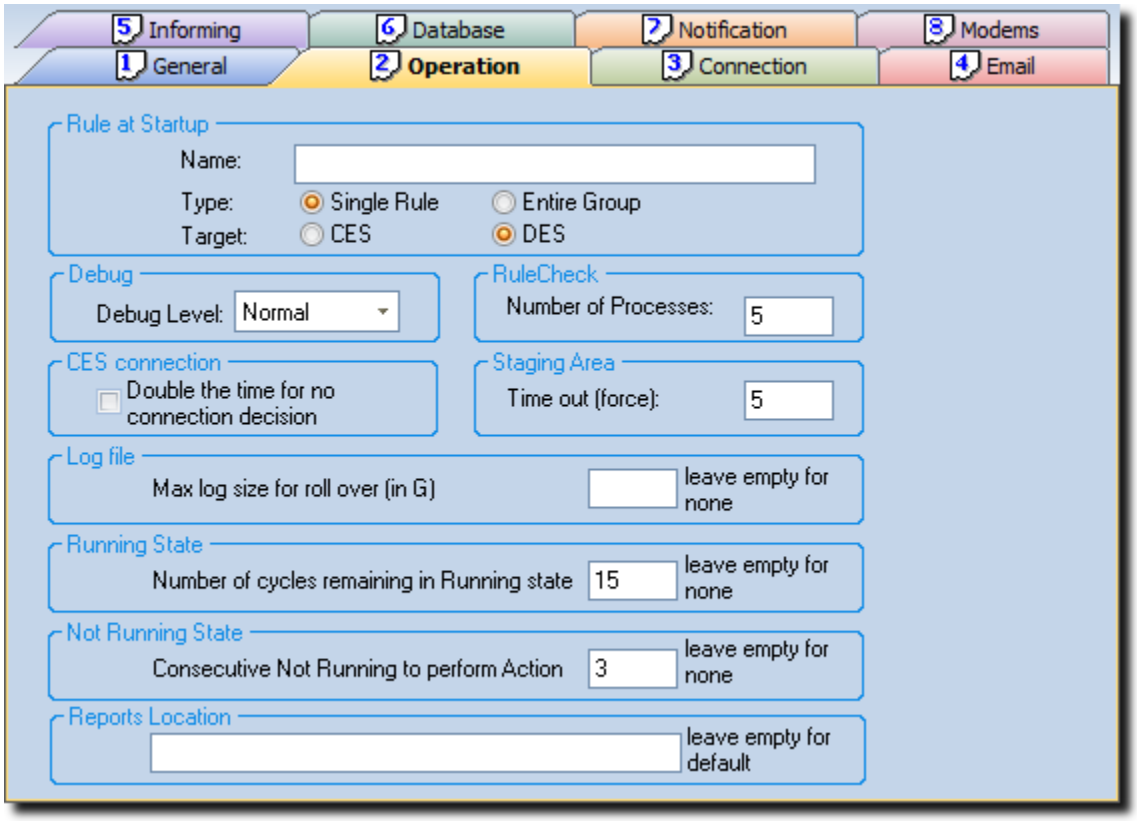
DES Name Unique identifier of a DES.

Description User's description of the Distributed Event Server.

Status DES status.
Enable instructs Event24x7 to establish communication with the DES and get the messages from the session attached to this DES.
Disable instructs Event24x7 not to establish connection with this DES.

Created Creation date of the DES.
Changed Date of last changed.
By Name of the user who made the last change

3.1.2.2 Operation Tab



Rule at Startup — Specify single Rule or group of Rules that will be activated automatically when connection with CES will be established.

Target — Where to activate the Rule or Group of Rules when it is activated at DES startup.

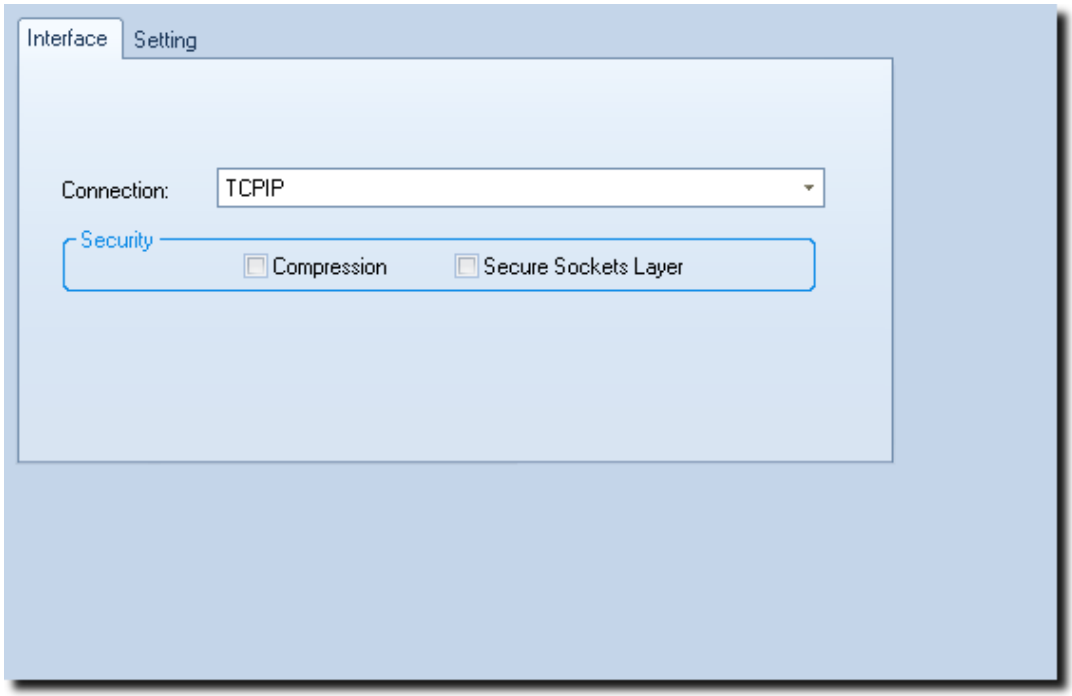
Debug — Set the debug level of the DES. Has same meaning as the Server Debug Level. Values:
Information – Show only critical error messages. This is the default.
Warning - Show critical and warning messages.
Error – Show all messages.

RuleCheck — Number of concurrent processes that check Rules for triggering.
The default is one. Change this number only if you were advised to do so from Event24x7's technical support.

Staging Area	Number of Minutes to force execution of elements in the Staging Area.
Log file – Max log size for roll over (in G)	The maximum size (in Giga Bytes) that a log file can occupy before it starts to rewrite itself.
Number of cycles remaining In Running State	The maximum number of times that a certain check (collector and parameter) can stay in the running state before the DES must be restarted.

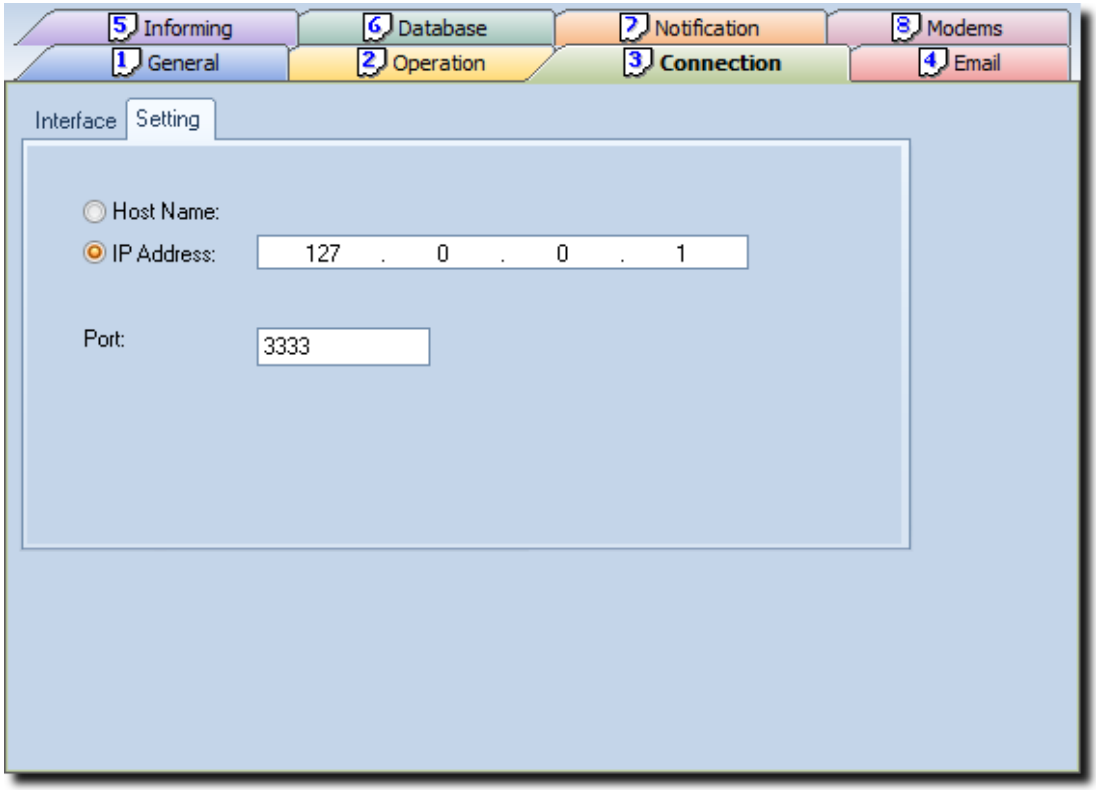
3.1.2.3 Connection Tab

3.1.2.3.1 Interface Tab



Connection	Defines the connection method to DES. Possible values are TCPIP and Pipe.
Security	Tick compression box if you want to send compressed messages. Tick Secure Sockets Layer for SSL communication.

3.1.2.3.2 Settings Tab



Each type of connection has different parameters to control its operations. The parameter tab varies according to the connection type chosen from the **Connection Tab.**

TCPIP connection

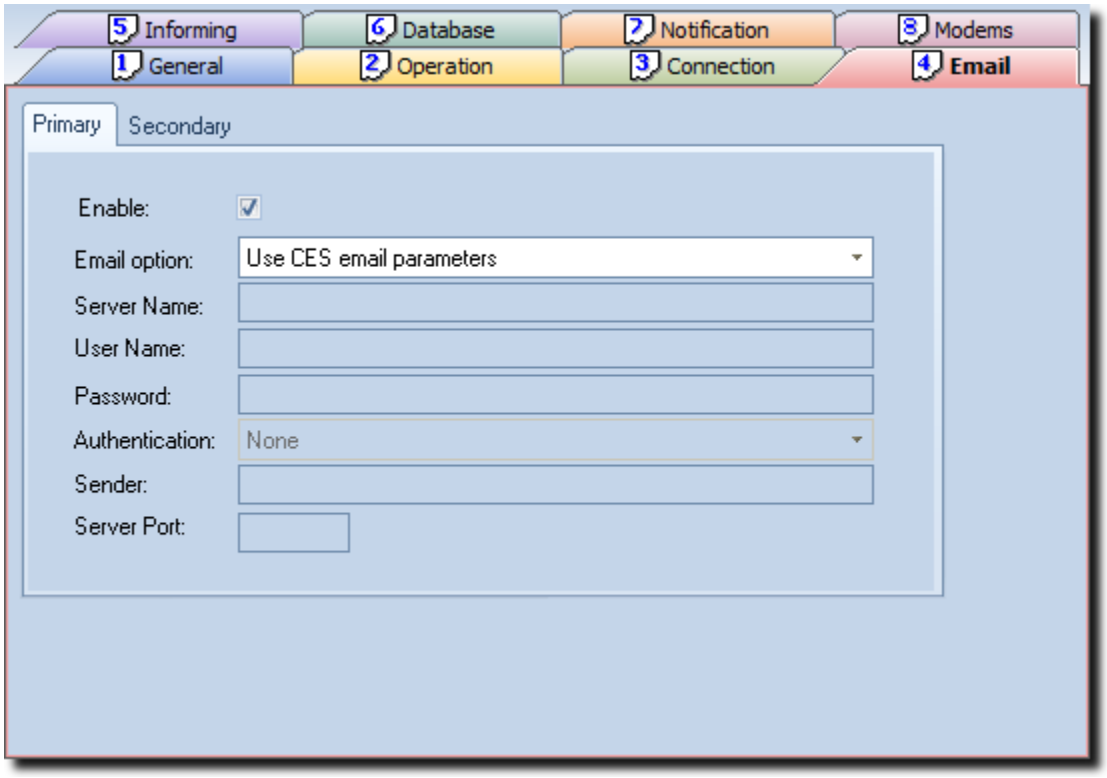
Host Name	TCP name
IP Address	IP address of DES
Port	TCPIP communication port

Pipe connection

Server	IPX server name or period (.) for current machine.
Suffix	Named pipe file suffix to make the Pipe Name unique.

3.1.2.4 Email Tab

Email parameters usually defined at CES level and distributed to all DESs.
This option lets you specify a different email configuration for the remote DESs.



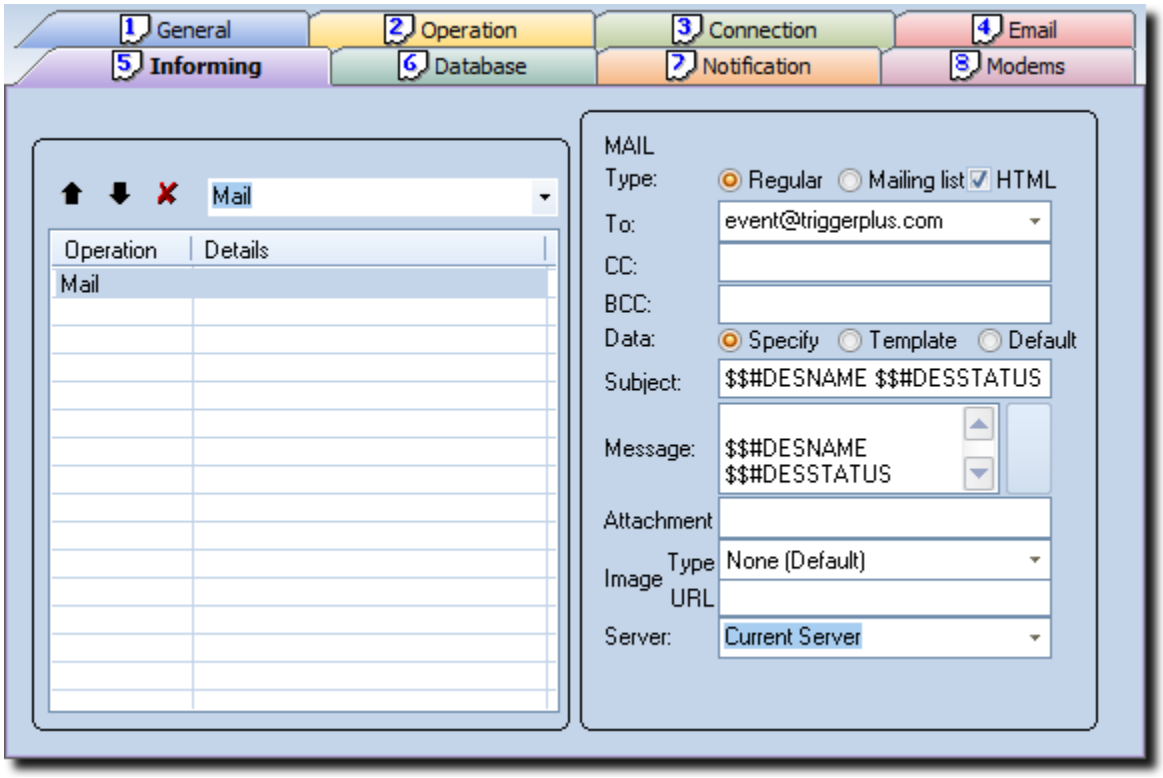
Email Option	Define DES mail configuration. Possible values: • Use CES parameters • Use mail parameters from here • Override CES parameters
Enable Mail	**Enable** or **Disable** sending mails. If this field is Disabled the Rule system will not send mail
Server Name	Your email server name.
User Name	Your user ID for the mail account.
Password	Your user password.
Authentication	Authentication type with the mail server

Sender	The Mail sender for outgoing mails.
Server (SMTP) Port	The default port uses by SMTP is 25. Zero is treated as poet 25.

3.1.2.5 Informing Tab

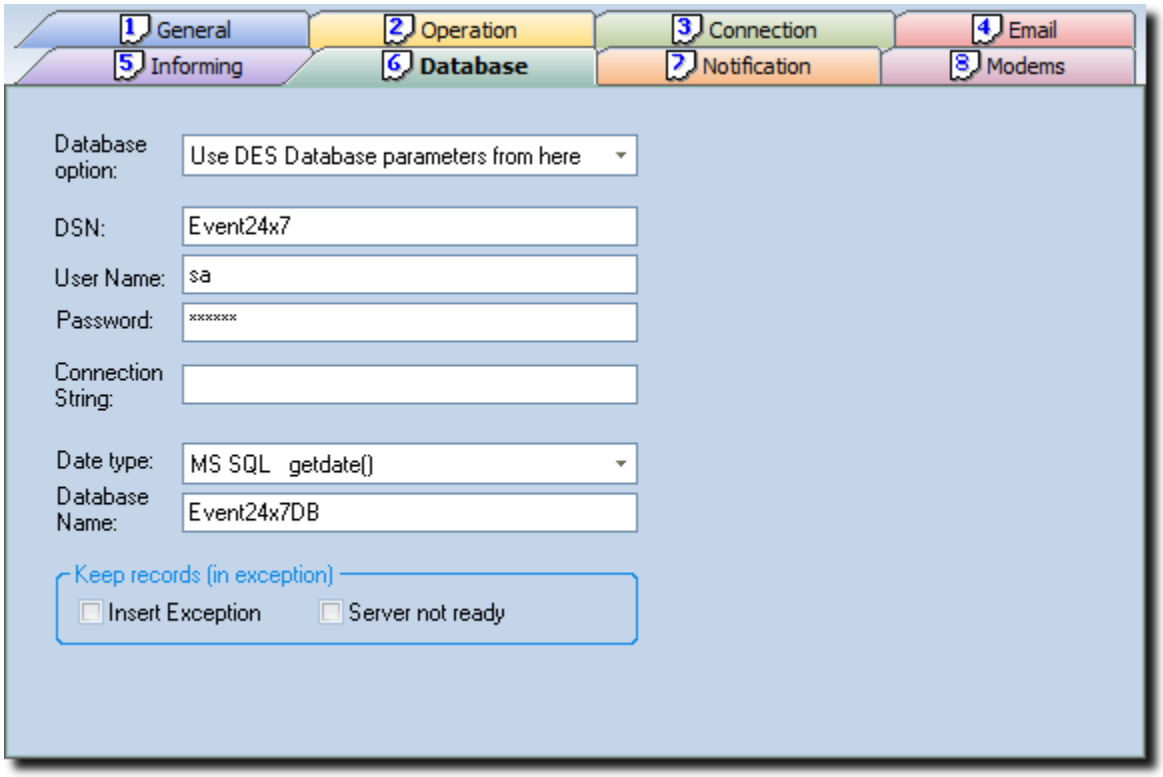
Perform Action! Commands when DES state changes.

Usually the Informing tab sends email when a DES becomes Inactive. The mail is sent from the CES.



3.1.2.6 Database Tab

Event24x7 let you store the parameters values in the Database. The database access is done from the DES. You can specify the database parameter from the CES level.
The database access is based upon ODBC.
For more information, please refer to the Database Manual.



Database Option

Options:
- Don't use database for storing the values.
- Use database and take the parameters from CES
- Use DES database parameters from here

DSN

Use as a connection to ODBC definition.

User Name
Password

In case the database is accessible to authorized personnel only.

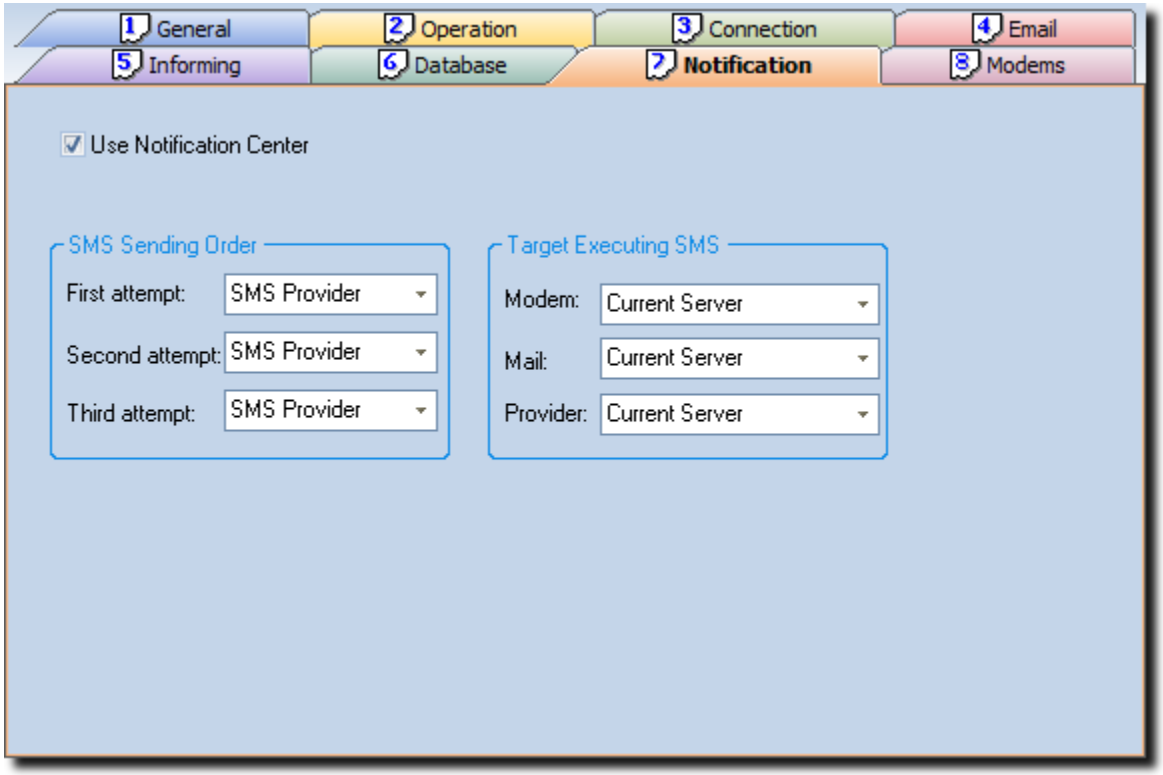
Connection String

Use this field for dynamic connection.
Specify the connection string you want Event24x7 to use.

Date Type	The first field in the table is the Date field. Every database system has a different built in function to create this value. Specify which one you use.
Database Name	Specify the name if USE command needs to be done before opening the table.
Keep Records (in exception)	
Insert Exception	Set this field to save exception records.
Server Not Ready	Set this field to save records when server is not ready.

3.1.2.7 Notification Tab

Event24x7 allows you to send SMS simply and automatically. In the Notification tab you need to enable the Notification Center and to select how to send the SMS. There are three ways to send SMS: Modem, Mail and SMS Provider. You can set the way to send SMS in each retry for every recipient. By default the SMS would be sent with local Notification Center, but if you don't have wireless modem at current DES you can redirect the sending to other DES.



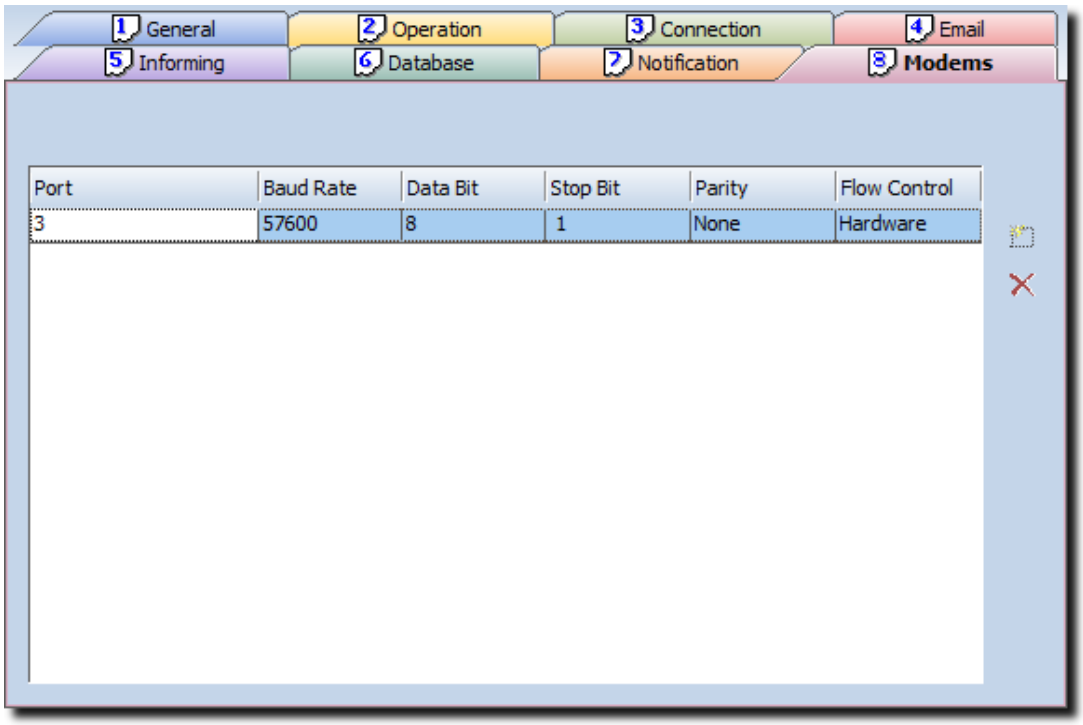
Use Notification Center Enable the use of Notification Center for SMS sending.

SMS Sending Order Choose the way to send the SMS:
Wireless Modem
SMS via Mail
SMS Provider

Target Executing SMS Select which DES to use for sending the SMS, for the Modem, Mail and Provider.

3.1.2.8 Modems Tab

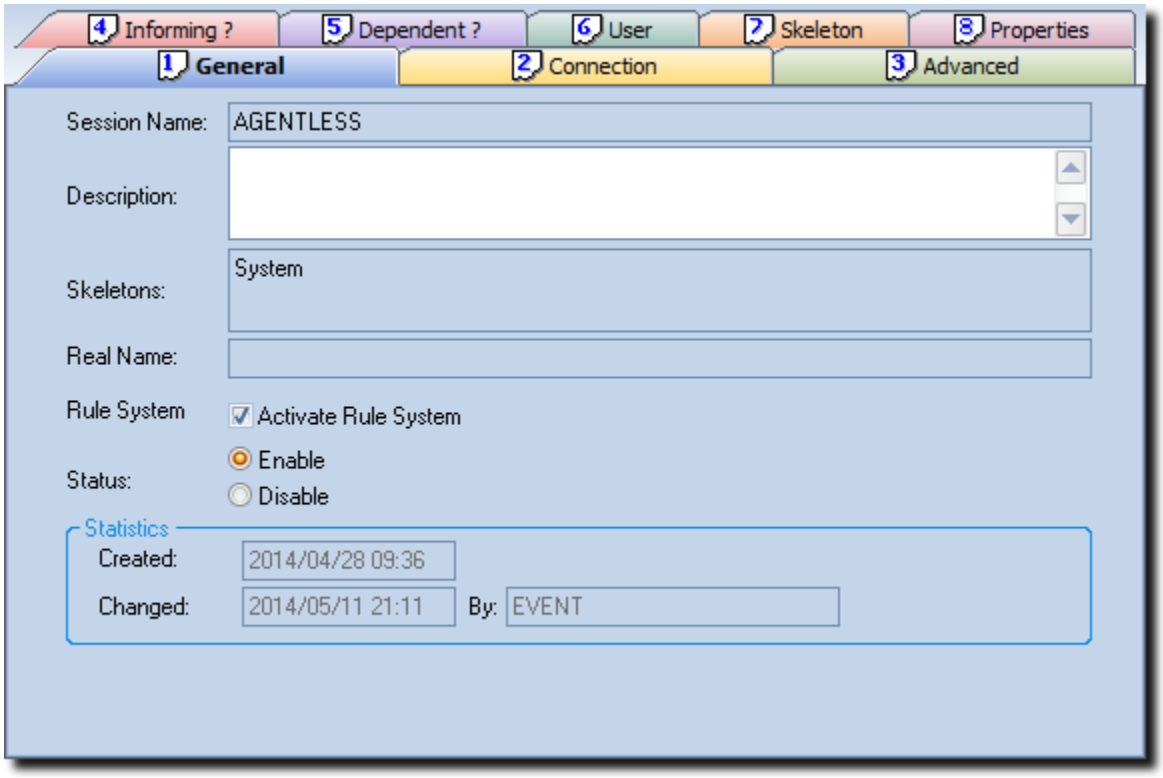
A wireless modem can be connected to DES in order to send SMS. The modem needs to be connected first to Windows and checked using the Control Panel -> Phone and Modem Options and then configured on the DES level in the Event24x7. It is important to set the parameters to match to the parameters in the Windows Control Panel.
Each DES can be configured to work with more than one modem.



Port	The port that the modem is connected to.
Baud Rate	The baud rate for the modem's communication.
Data Bit	Number of data bits (5, 6, 7, 8).
Stop Bit	Number of stop bits (1, 1.5, 2).
Parity	Parity bit in use (Even, Odd, None).
Flow Control	Flow Control (Hardware, Software).

3.1.3 Sessions Configuration

3.1.3.1 General Tab



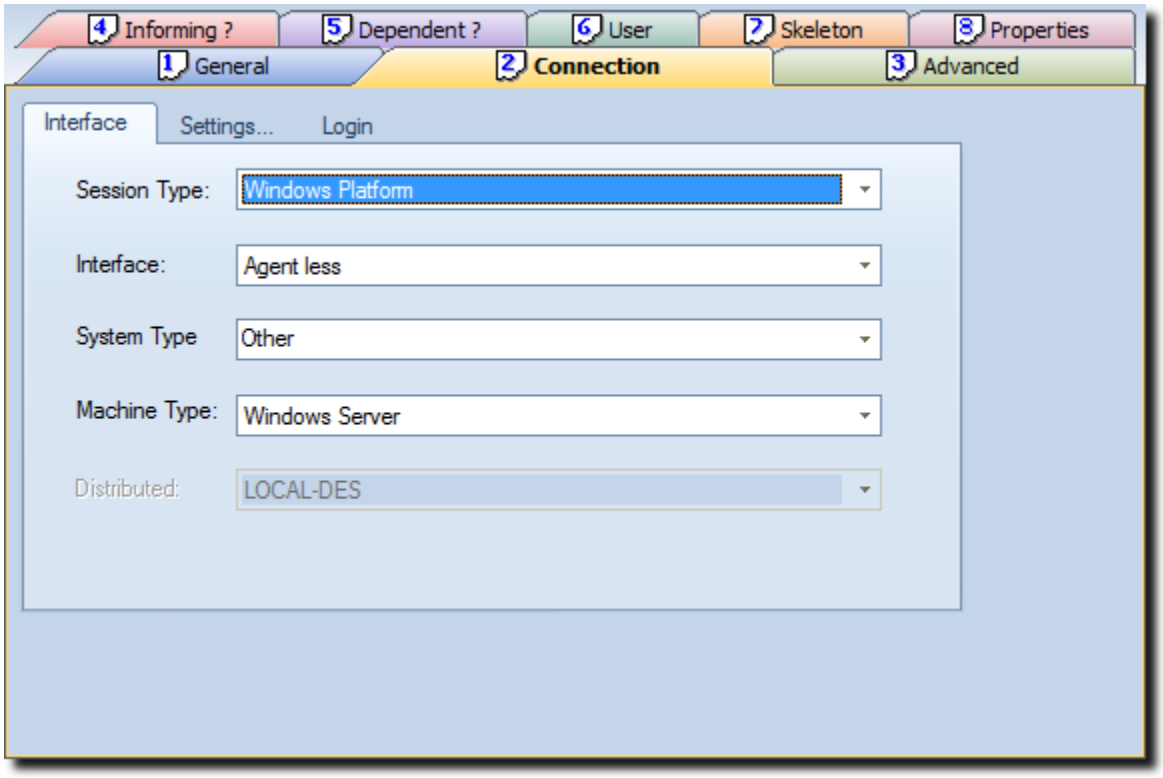
Session Name	Unique identifier of a session.
Description	User's description of the session.
Skeletons	List of the Skeletons used to build this Session.
Real Name	Session real name as discovery by the Discovery process
Rule System	Specify whether this session is part of the Rule system.

	Usually every message coming from a session is checked against the active rules. If rules are triggered due to the incoming message they are executed. If you uncheck **Activate Rule System,** messages coming to this session from the Rule system will be omitted.
Status	Session status. **Enable** instructs Event24x7 to establish communication with the session and get the messages from the session. **Disable** instructs Event24x7 not to establish connection with this session.
Created	Creation Date of the session
Changed	Date of last change
By	Name of the user who made the last change

3.1.3.2 Connection Tab

Connection tab define the Event24x4 connections to the manage sessions.
It has three pages.

3.1.3.2.1 Interface



Session Type — Defines the operating system of the current session. Possibilities: Windows, UNIX, Linux, SNMP, TCPIP, Email, Serial Connection and Networking.

Interface — Define the type of interface Event24x7 uses for connecting to the session. Some of the supported operating systems have several ways to connect. For example Windows has four different connection types: Agent less, TCPIP, Named Pipe and SNMP. The Interface defines how event24x7 connects to the session.

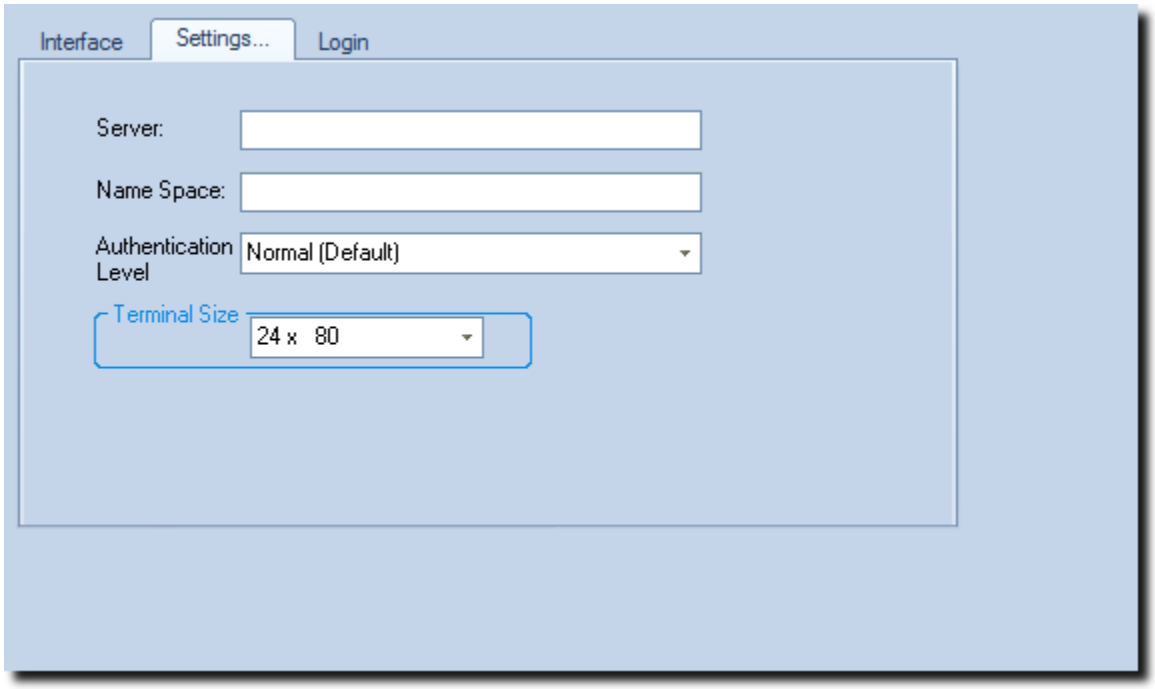
System Type	Specify the type if Windows, in case of UNIX specify the Vendor. This parameter is for applying out-of-the box solutions by the wizards. Different UNIX vendors have different solutions that match the operating system.
Distributed	Display the DES the current session is related to.

3.1.3.2.2 Settings

Each type of interface has different parameters to control its operations. The Settings page varies according to the interface type chosen from the **Interface Page.**

3.1.3.2.2.1 Agent less Connection for Windows

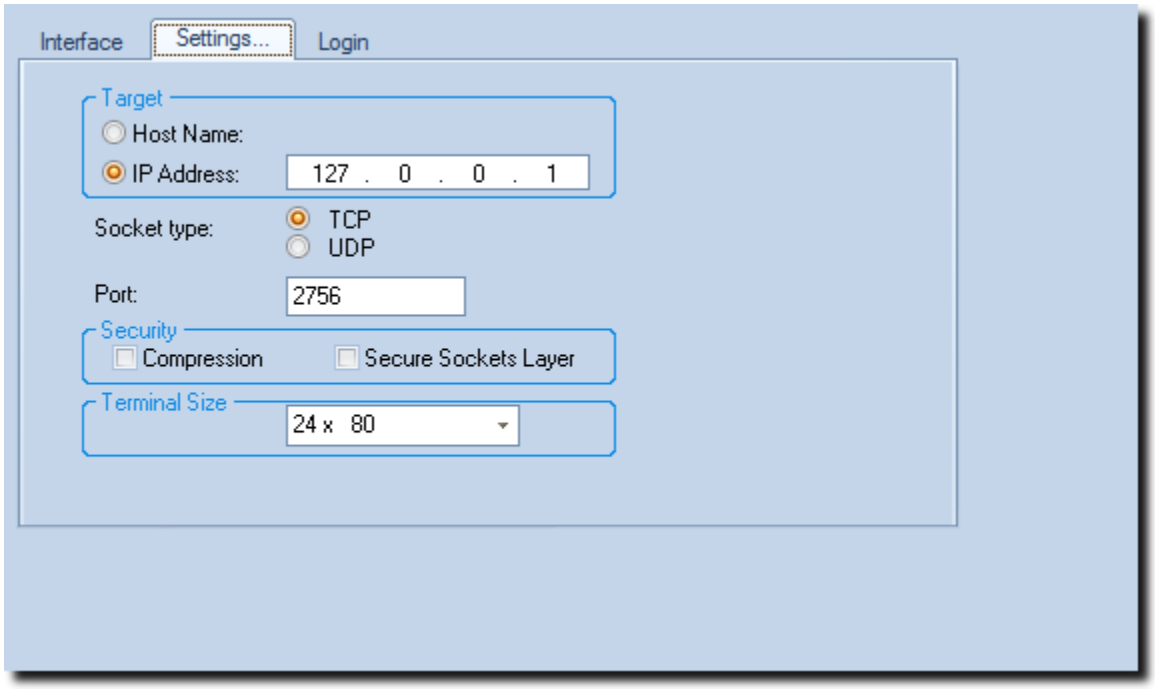
Manage Windows Operating System remotely without installing local agent. Event24x7 take full advantage of the WMI protocol.



Server	Server name of the managed platform. If the platform resides on the local PC it must remain empty.
Name Space	WMI name space. The default is **root\cimv2**.
Terminal Size	Screen size: rows by columns.

3.1.3.2.2.2 Agent via TCPIP for Windows

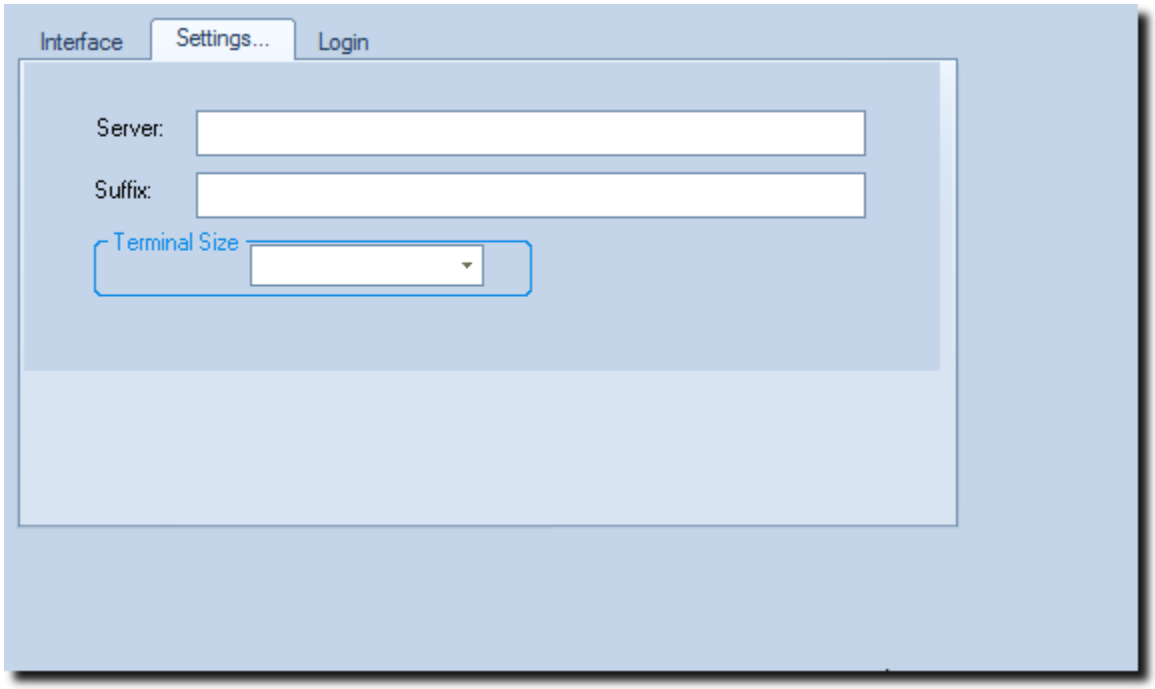
Manage Windows Operating System with local agent. Event24x7 Remote Event Server (RES) must be installed. The communication is based upon TCPIP.



Host Name	Target computer name.
IP Address	Target computer TCPIP address.
Socket type	TCP or UDP socket
Security	Tick compression box if you want to send compressed messages. Tick Secure Sockets Layer for SSL communication.
Port	TCPIP communication port
Terminal Size	Screen size: rows by columns.

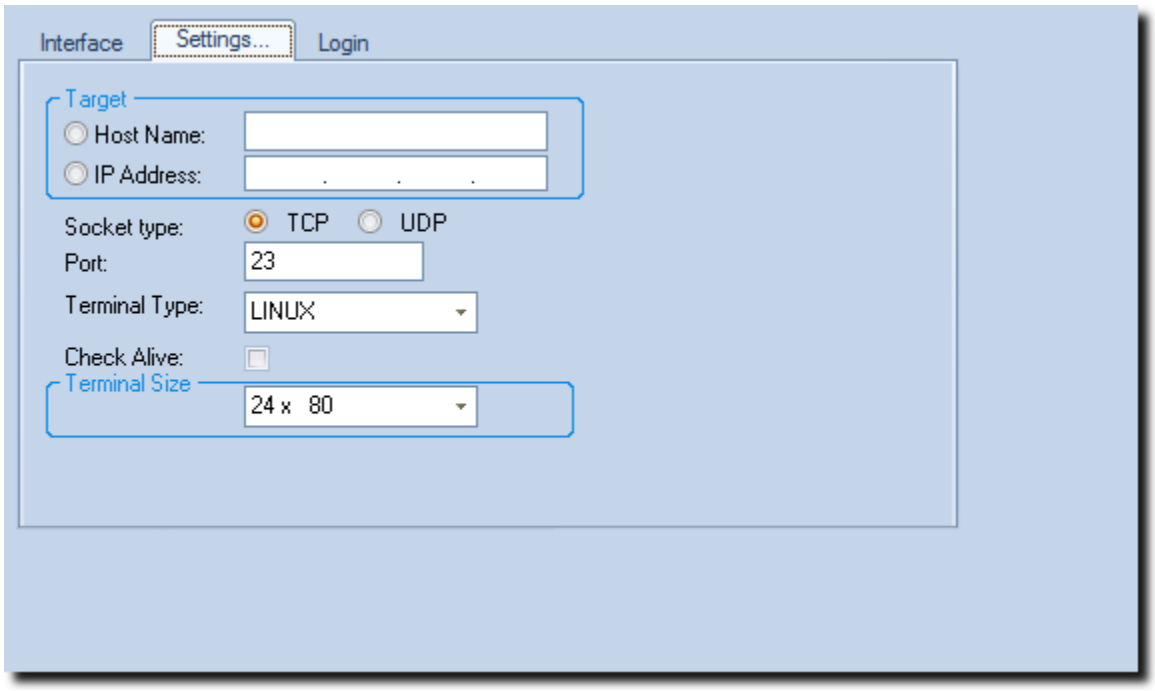
3.1.3.2.2.3 Agent via Named Pipe for Windows

Manage Windows Operating System with local agent. Event24x7 Remote Event Server (RES) must be installed. The communication is based upon Named Pipe.



Server	Server name. If the server is current pc, leave it blank.
Suffix	Named pipe file suffix to make the Pipe Name unique.
Terminal Size	Screen size: rows by columns.

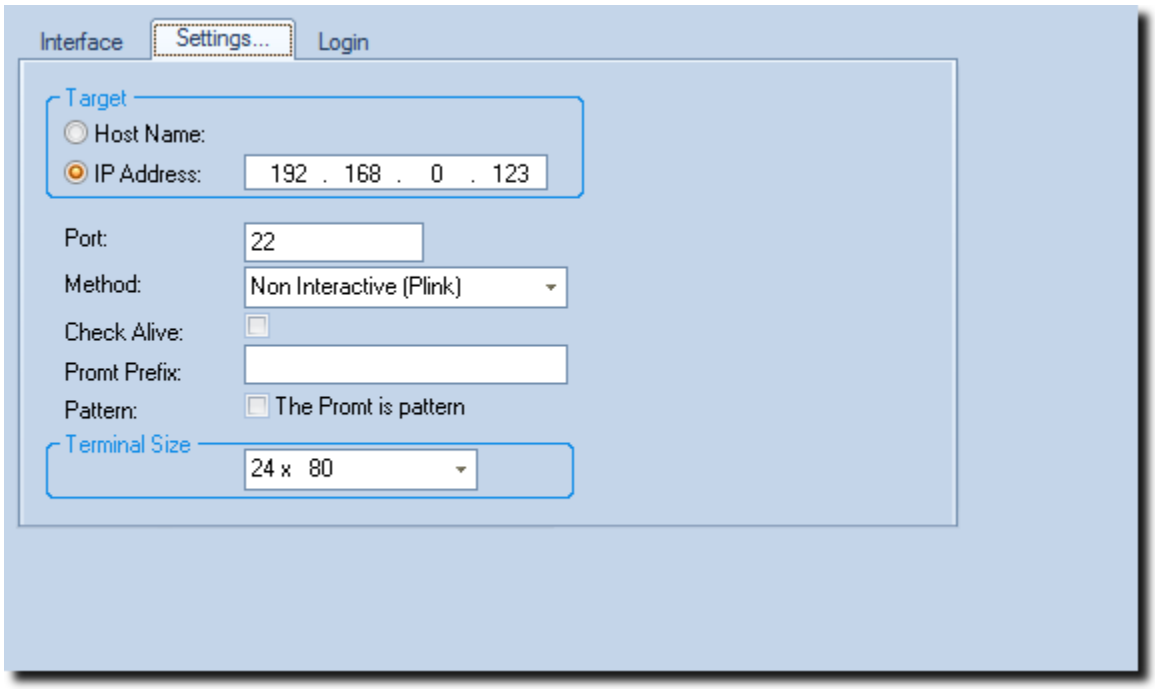
3.1.3.2.2.4 Telnet Connection for UNIX and Linux



Host Name	Telnet to host name specified here.
IP Address	Telnet to host by IP address.
Socket type	TCP or UDP socket.
Port	Port number.
Check Alive	Tick box if you wish to check if host is alive.
Terminal Size	Screen size: rows by columns.

3.1.3.2.2.5 SSH Connection for UNIX and Linux

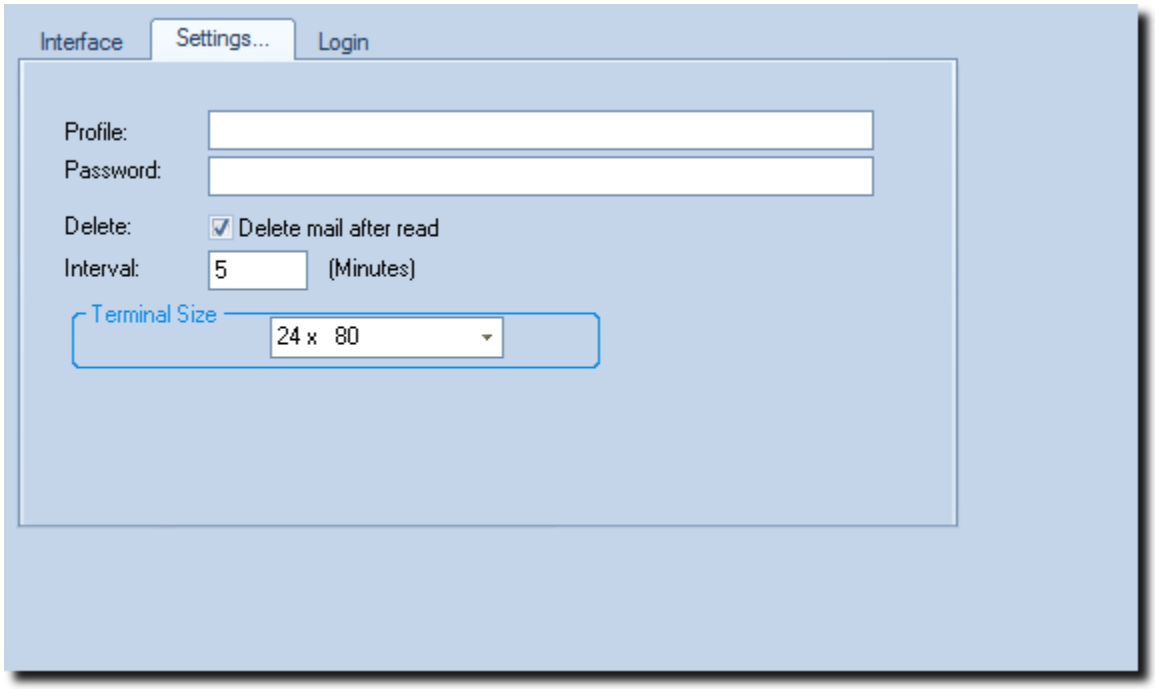
Manage UNIX and Linux Operating System with SSH.
Event24x7 executes plink (Putty batch) in background.



Host Name	Target host name.
IP Address	Target host TCPIP address.
Port	Port number. The default port for SSH is 22.
Check Alive	Tick box if you wish to check if host is alive.
Prompt Prefix	Optional. You can specify the prompt or just prompt's prefix.
The prompt is a pattern	Tick box if you wish the prompt prefix to act as a pattern for other prompts.
Terminal Size	Screen size: rows by columns.

3.1.3.2.2.6 MAPI Client Connection for Emails

Manage Emails from a private folder. The MAPI interface is based upon an Exchange client that must exist on the same computer.
The email's From and Subject fields can be intercepted by Rules.

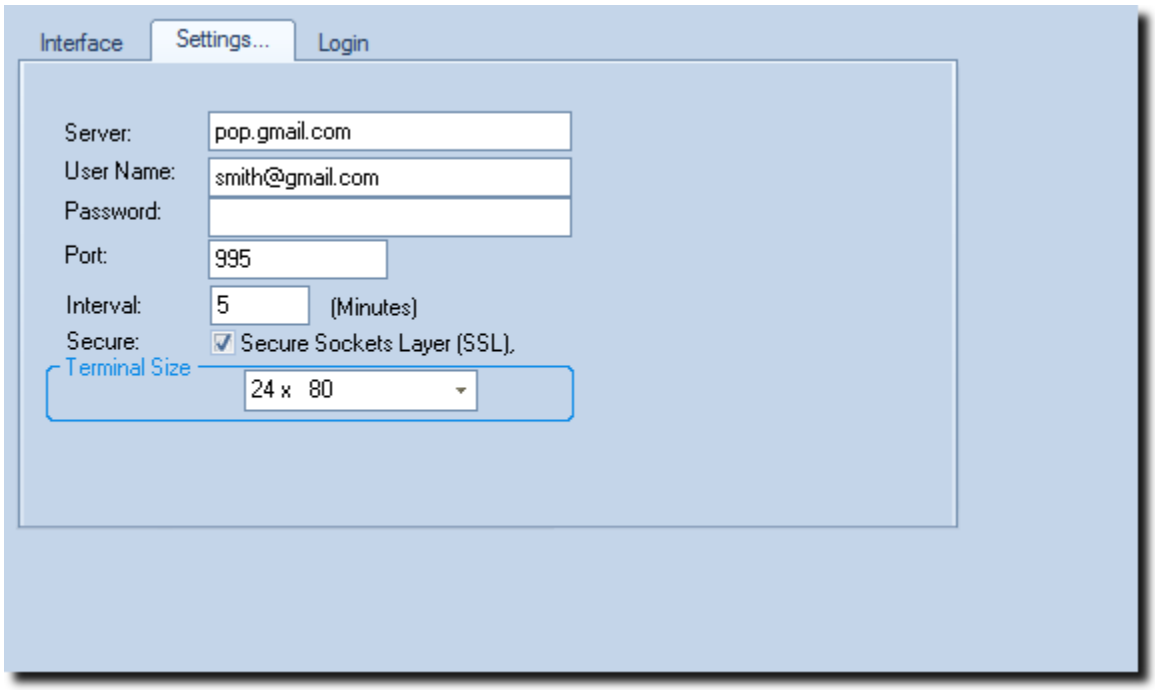


Profile	Profile name. The profile name that is used by the Exchange can be located at: **Program->Control Panel->Mail** and then open Show Profile.
Password	Optional Password.
Delete	Tick this field if you want Event24x7 to delete read mails. Read mails will be marked as read and not read by Event24x7 anymore.
Check Alive	Tick box if you wish to check if host is alive.
Interval	Interval for check mail cycle.
Terminal Size	Screen size: rows by columns.

3.1.3.2.2.7 POP3 Connection for Emails

Manage Emails with POP3 protocol.
The email's From and Subject fields can be intercepted by Rules.

Every read mail is automatically deleted by Event24x7.

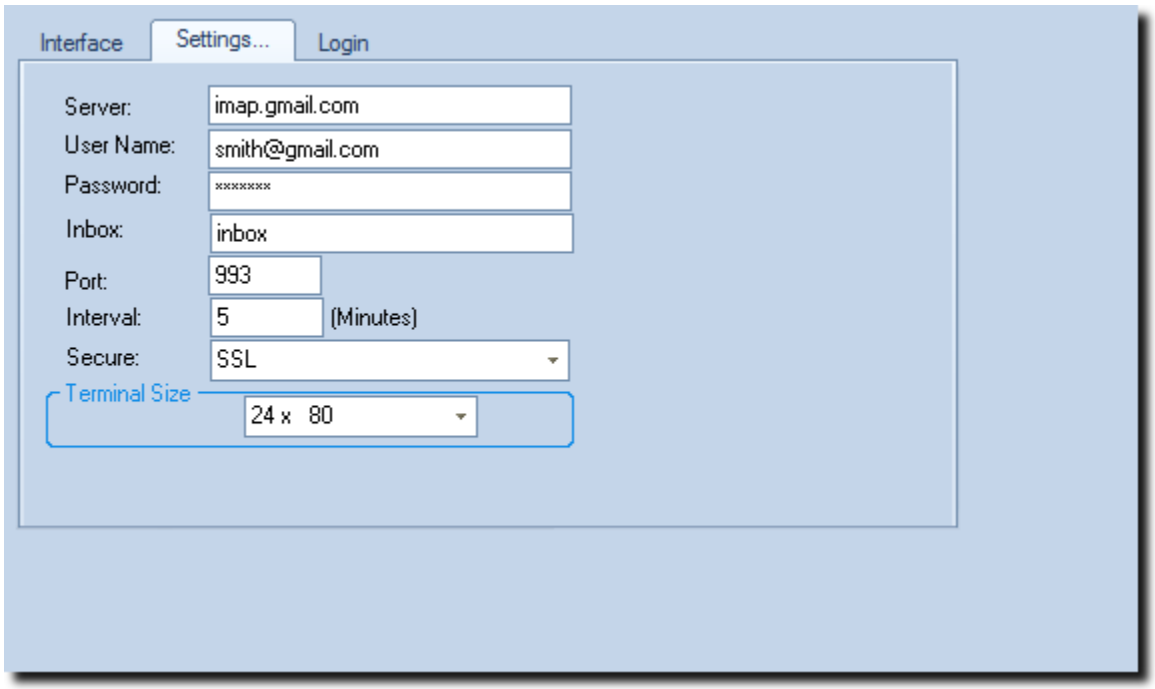


Server	POP3 server name.
User Name	Mail address
Password	The User's password
Port	Default POP3 port is 995.
Interval	Interval for check mail cycle.
Secure	Tick the secure field to use SSL connection.
Terminal Size	Screen size: rows by columns.

3.1.3.2.2.8 IMAP4 Connection for Emails

Manage Emails with IMAP4 protocol.
The email's From and Subject fields can be intercepted by Rules.

Every read mail is automatically deleted by Event24x7.



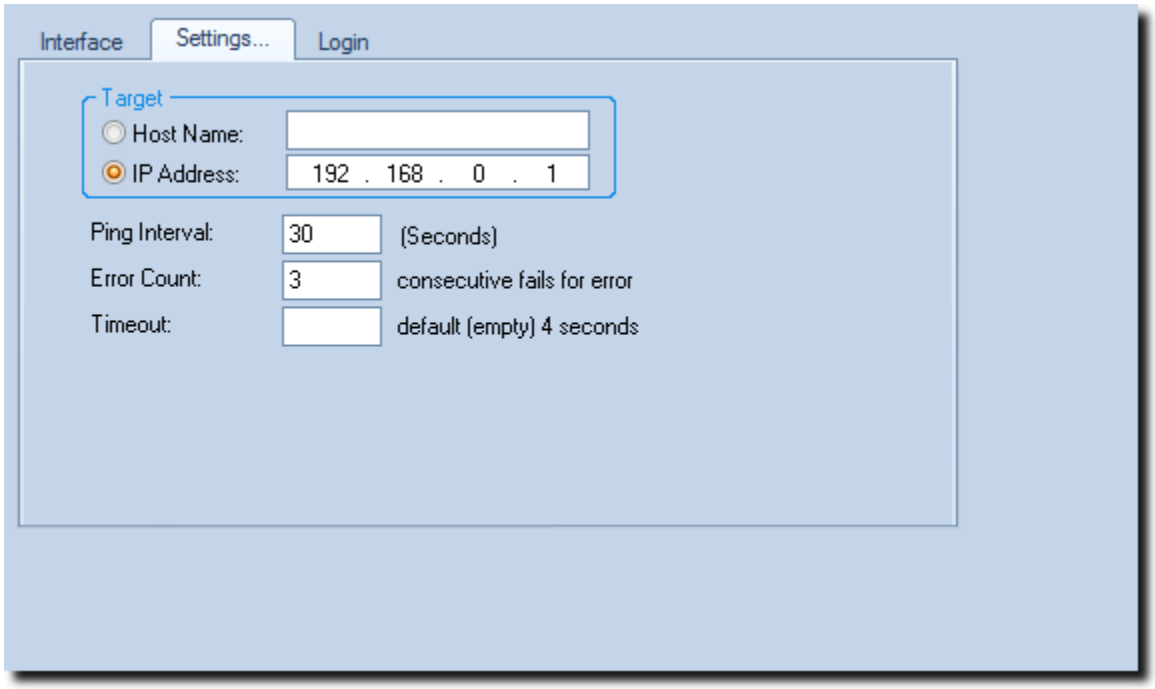
Server	IMAP4 server name.
User Name	Mail address
Password	The User's password
Inbox	Inbox folder name. The default name is inbox.
Port	Default IMAP4 SSL port is 993.
Interval	Interval for check mail cycle.
Secure	Chose the secure option None, SSL or TSL.
Terminal Size	Screen size: rows by columns.

3.1.3.2.2.9 RS-232C for Serial connection

Port	Serial port number.
Baud Rate	Speed of connection
Parity	Choose none, even, mark, odd or space.
Data Bit	Serial data format may contain five to eight data bits.
Stop Bit	One, two, or one and a half stop bits may be used in the serial data format.
Flow	Check appropriate box: DTR/DSR -Data Terminal Equipment to Data Communications Equipment RTS/CTS - Request To Send/Clear To Send XON/XOFF signaling
Terminal Size	Screen size: rows by columns.

3.1.3.2.2.10 Networking Connection

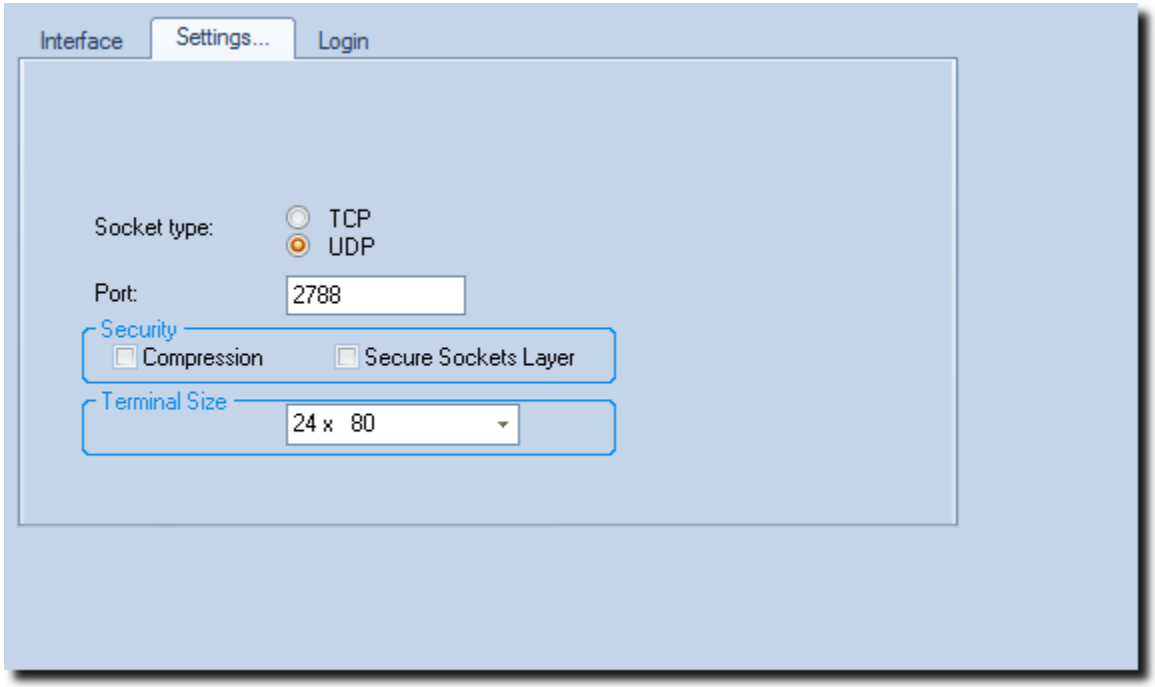
Manage networking equipment like Router, Switches, hubs and any user's proprietary networking equipment like telephony PBXs.



Target	Target IP or host name
Ping Interval	Interval of performing ping connection checks to target.
Error Count	Some hardware fails sometimes on the ping request. This field sets the number of consecutive ping request failures required to reset the connection.

3.1.3.2.2.11 TCPIP Connection

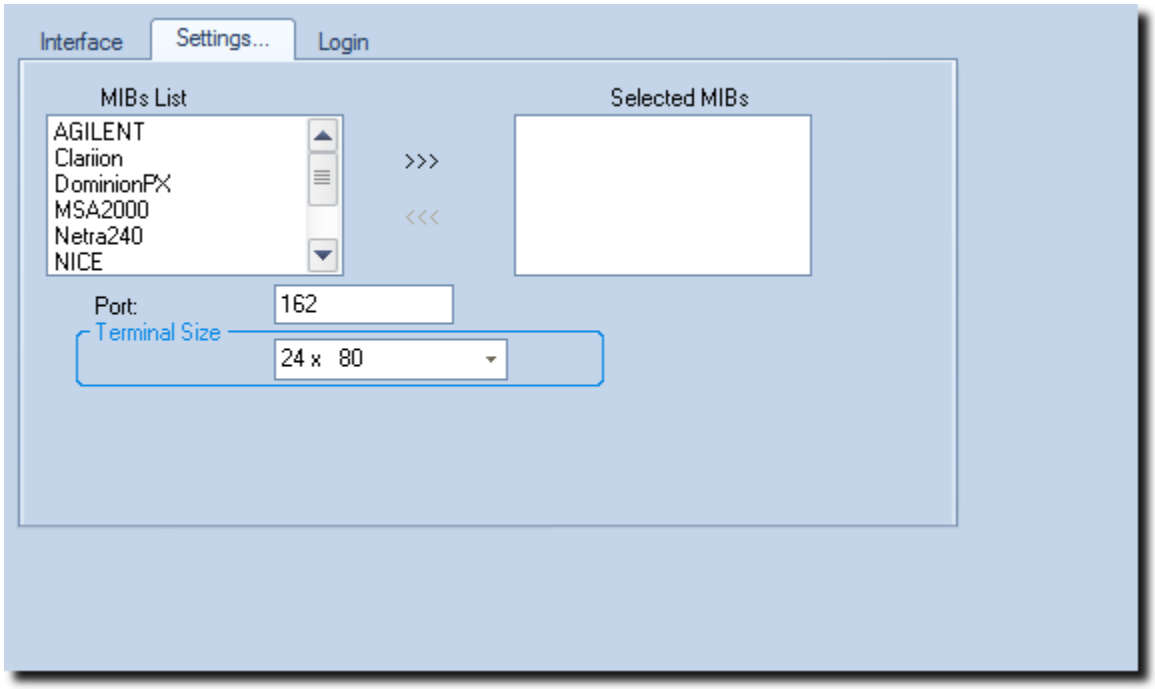
TCPIP connection doesn't manage a specific target. It opens a TCPIP interface and waits for incoming packets. It allows external program sending events and messages to Event24x7. Event24x7 provides the **Event24x7Message** utility which can be used to send such messages from any computer.



Security	Tick compression box if you want to send compressed messages. Tick Secure Sockets Layer for SSL communication.
Socket type	TCP or UDP socket
Port	TCPIP communication port
Terminal Size	Screen size: rows by columns.

3.1.3.2.2.12 SNMP Connection

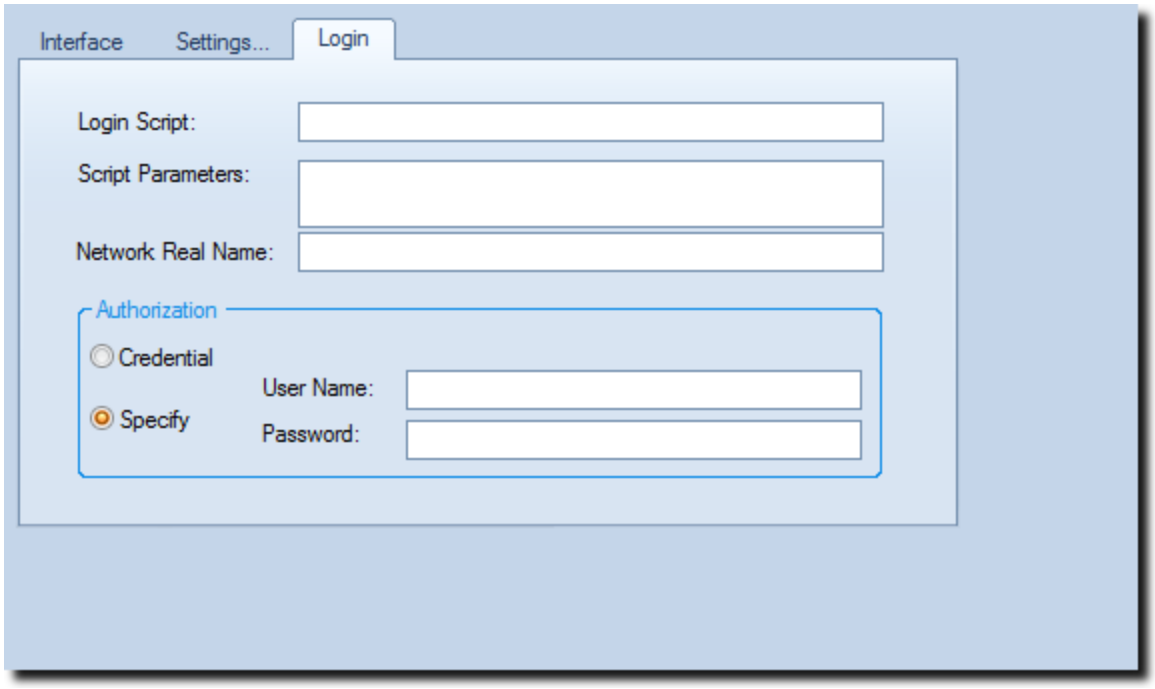
SNMP connection doesn't manage a specific target.
It opens a SNMP interface and waits for incoming Traps.



MIB	Specify Event24x7's Defined MIBs. When Event24x7 receives traps that are MIB defined it displays the meaning of the traps in addition to the OIDs.
Port	Default SNMP Port number is 162.
Terminal Size	Screen size: rows by columns.

3.1.3.2.3 Login

Perform automatic Login to the session connected to Event24x7. Some operating systems require the user to perform a Login in order to gain authorization for their access.



Login Script — Login script name.
The script should be defined in the Script Definition screen.

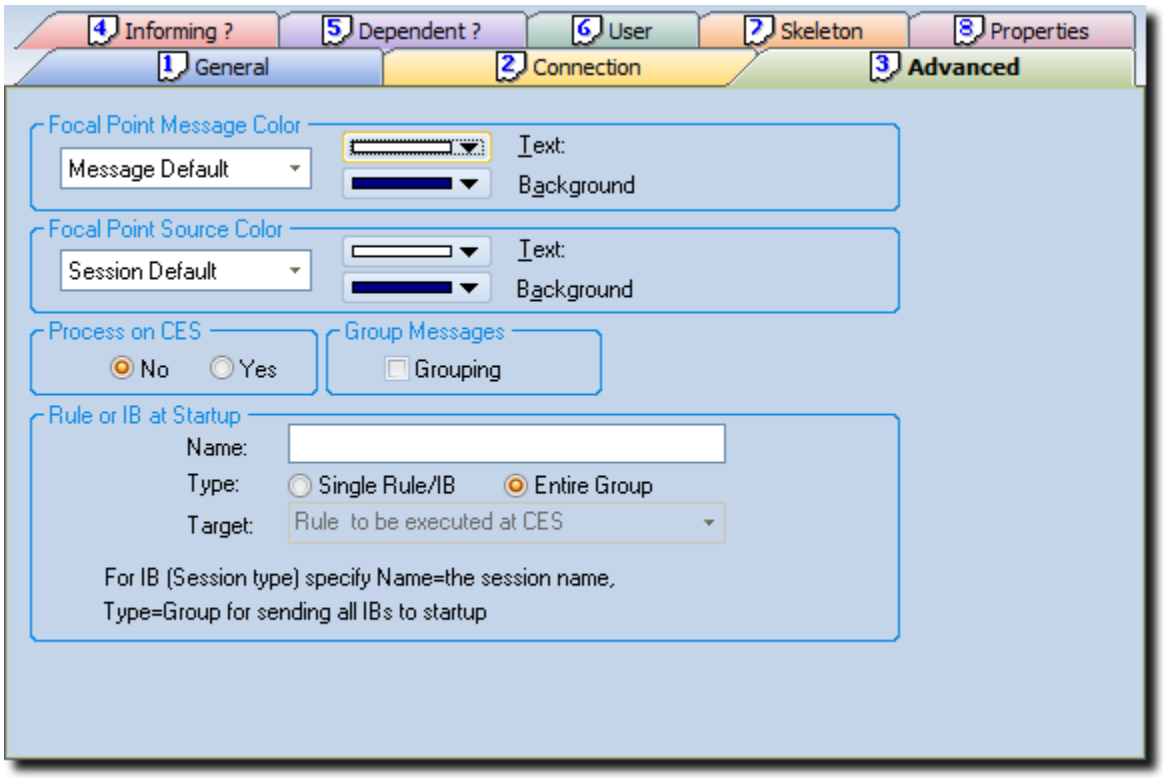
Script Parameters — Pass parameters to the Login script at execution time. One of the usages is to hide the password. Instead of hard coding the password in the script, pass it as a parameter.

$$#LOGINPASWORD for example, is Event24x7 system variable that takes the password from below and passes it to the script.
In the script, in order to get a specific parameter, use the syntax of **$$#WORDn** where n is 1, 2, …, n for selected position.

User Name — User Name that performs Login.
In the case of domain controller connection, use domain name as part of the user name.
For example, if the target domain name is EX1
The User name should be: **EX1\administrator.**

	In case of workgroup user, the monitored computer name must be part of the user name: **smith\administrator.**
Password	The User's password for Login.

3.1.3.3 Advanced Tab



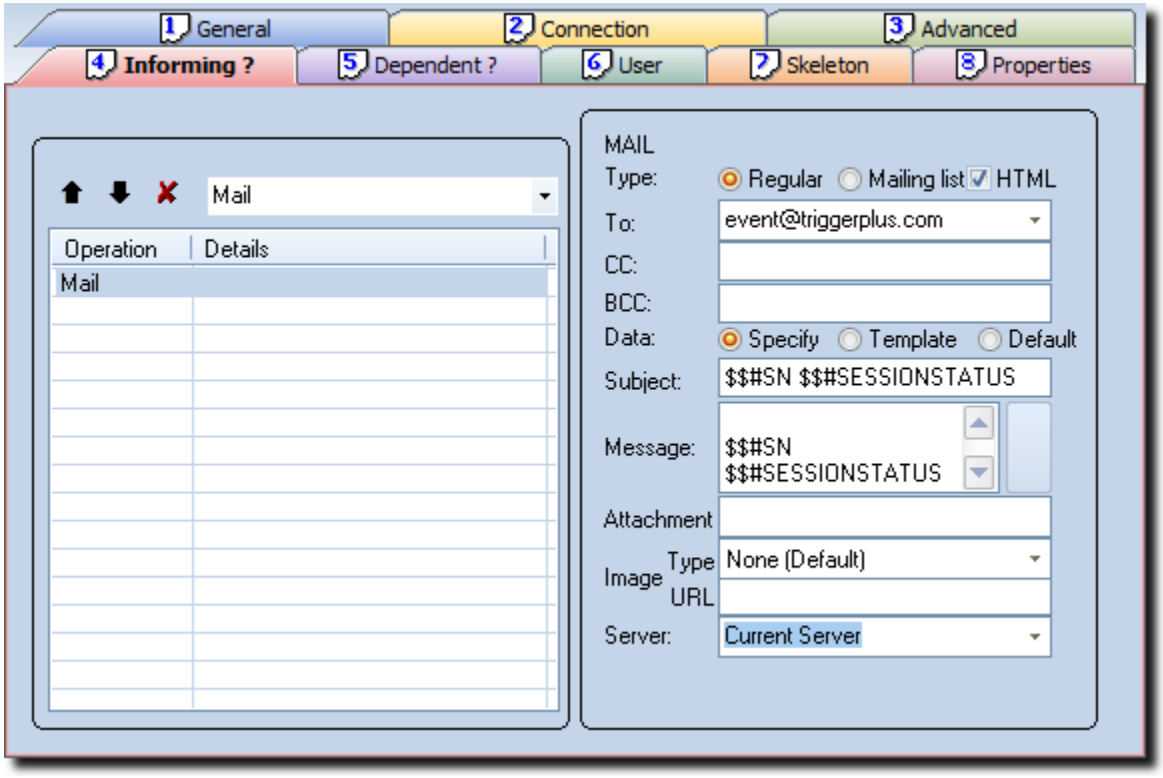
Focal Point Message Color	Defines the default color for the message part of the Focal Point screen. All the messages coming from the sessions are displayed on the Focal Point screen. A Focal Point message has three parts: Source, Time and Message.
Focal Point Source Color	Defines the default color for the source part of the Focal Point.
Process on CES	This radio button determines whether messages from this session will be sent by default to CES rule processing. By default this value set to No. Event24x7 rules can override this behavior and forward specific messages to the CES.

Group Messages	By default when the DES finishes evaluating the event which arrived from a session, it is sent automatically to the CES for further evaluation. When Event24x7 deals with huge events this might cause performance issues. For example, when Event24x7 must handle a user log file which has many records written to it simultaneously. Group Messages assist us in handling this situation. When checked, Event24x7 divides the events into groups and sends them as such to the CES. This reduced the overhead of sending one event at a time.
Rule or IB at Startup	Send single Rule or entire group to the session when it becomes active. A session of type RES (Smart Agent) has the capabilities to activate Information Base. **IB at Startup** would activate the IB defined here automatically when the session status becomes Active. For more information on the Information Base, please refer to Information Base Definition, ACTION! Parameters for Information Base and Information Base Variables Sections.

3.1.3.4 Informing ?

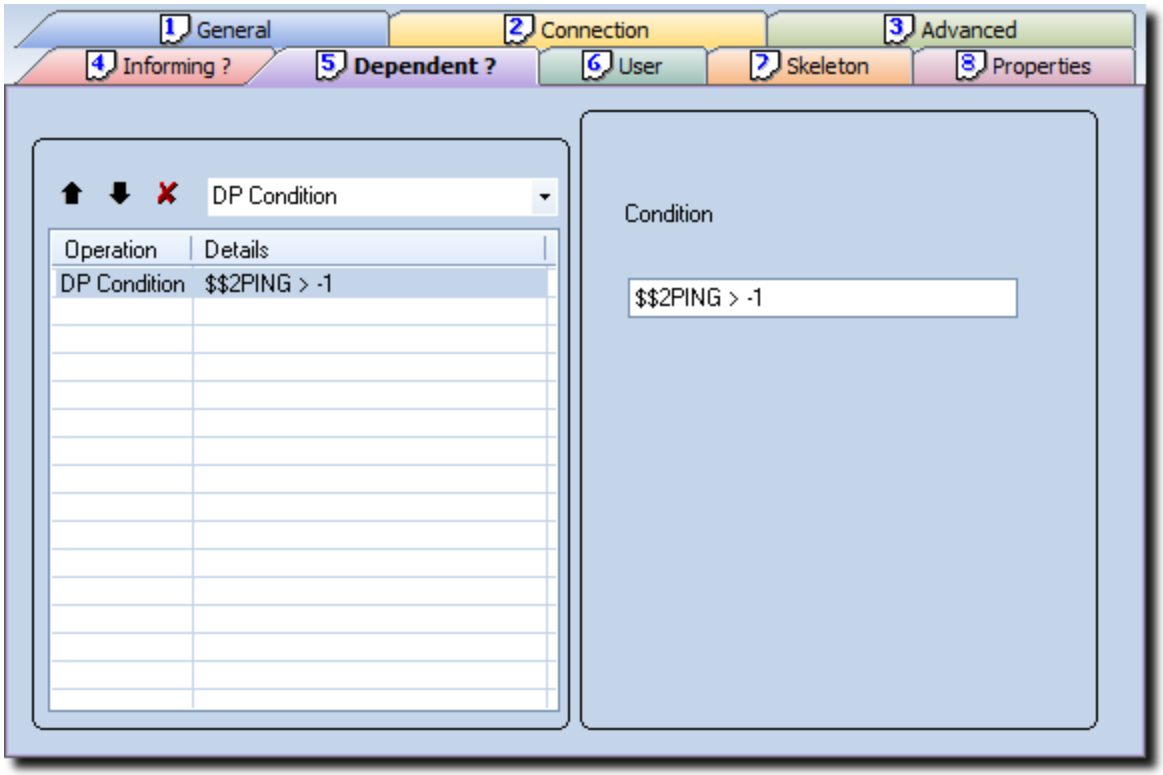
Perform Action! Commands when Session state changes.

Usually the Informing tab sends email when a Session becomes Inactive.



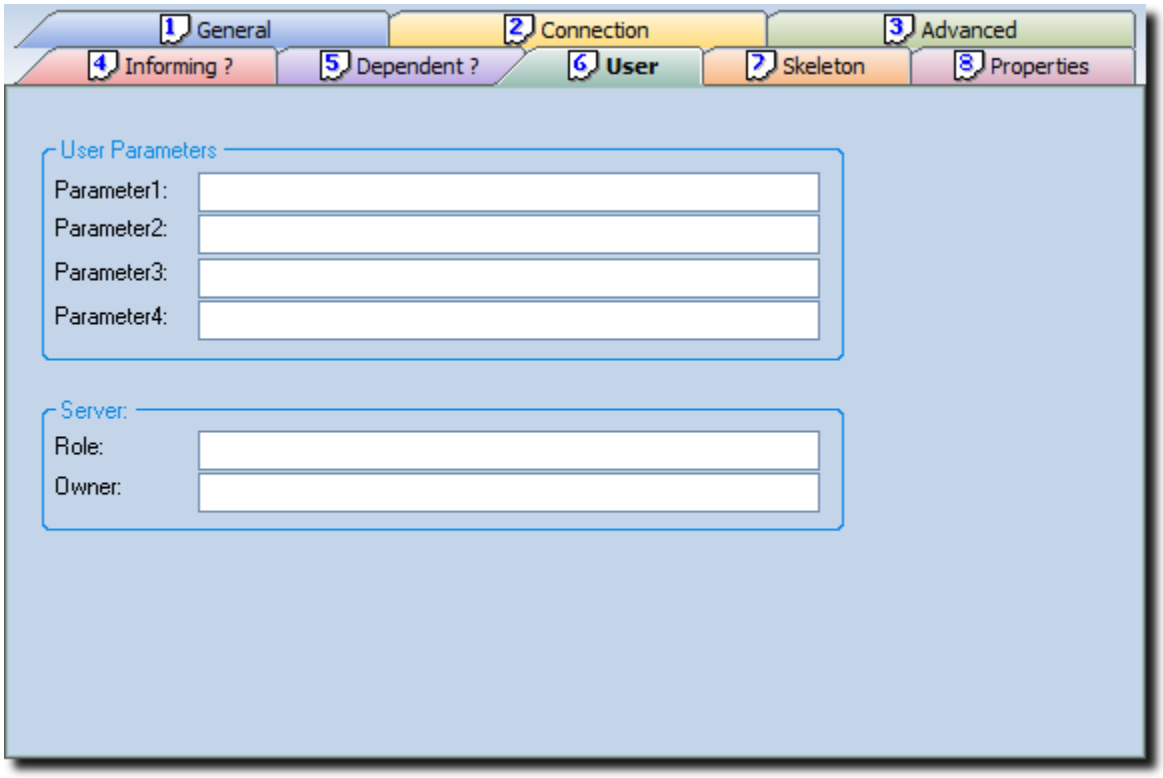
3.1.3.5 Dependent ?

Define the pre-requisite conditions for the session.



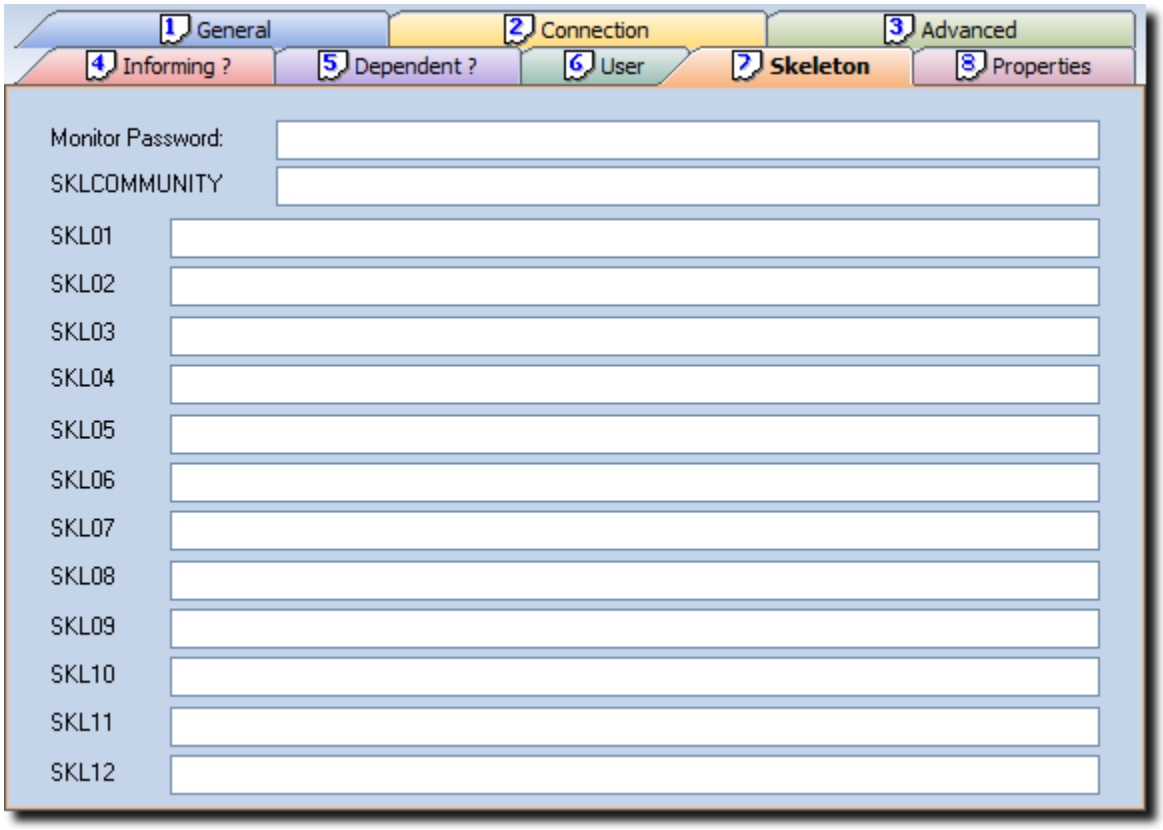
If there are conditions defined, the session will be Active only when all the defined conditions are met. A session that failed in one of these conditions will be in the **Waiting** status.

3.1.3.6 User Tab



User Parameters	Allowing you to define global parameters for general purposes. You can refer to those parameters as: $$#SESSIONUSR1, $$#SESSIONUSR2, $$#SESSIONUSR3 and $$# SESSIONUSR4 accordingly. You can use these parameters in the Parameter Definition that belongs to the session
Server	Allowing you to define Role and Owner fields that could be used for notification purposes.

3.1.3.7 Skeleton Tab



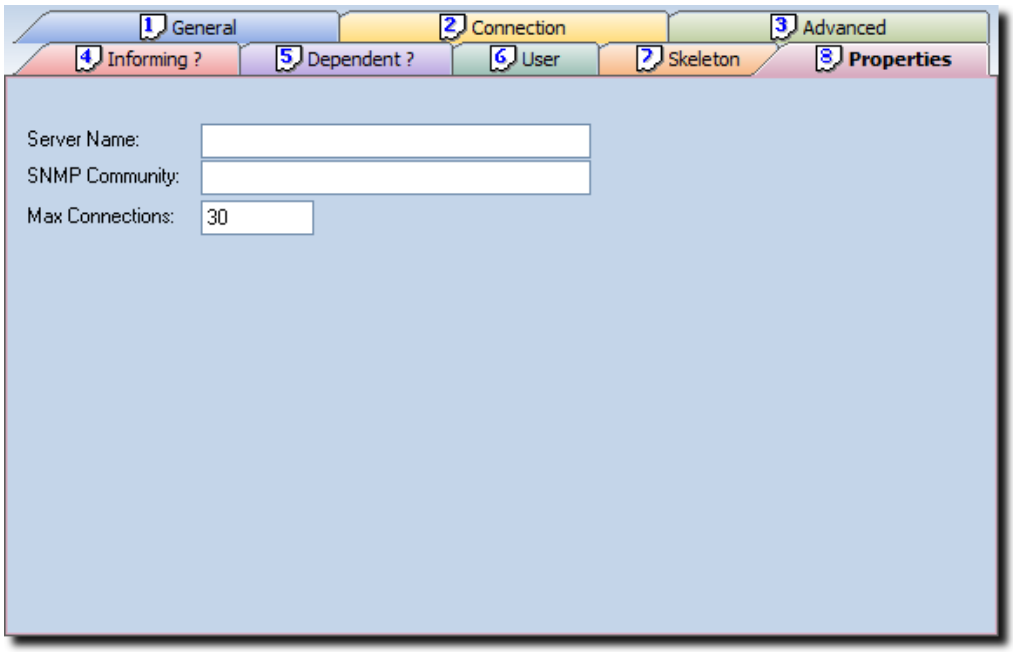
Monitor Password	Session variable that can hold a password for use when rebuilding skeleton.
SKLCOMMUNITY	Session variable that can hold a community value for use when rebuilding skeleton.
SKL01 – SKL12	Session variables that can hold any value desired by the user for use when rebuilding skeleton.

3.1.3.8 Properties Tab

Properties tab is part of the Event24x7 Performance analyst.
For performance issues, Event24x7 holds another set of connections to the managed platforms.

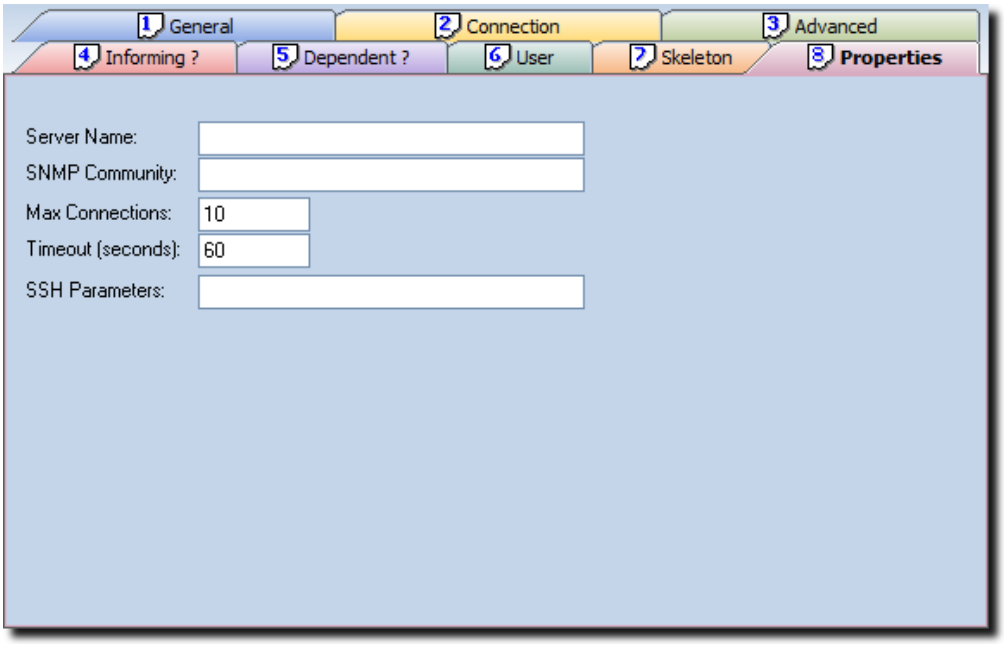
3.1.3.8.1 Properties

This tabbed page changes according to the type of session selected. If it's a windows session, then it will appear like this:



Server Name	Server Name when one logs in from a remote platform.
SNMP Community	Default community to SNMP commands. When the Community field at the one of the SNMP commands remain empty Event will override it with the value given here.
Max Connections	How many open connections Event24x7 is allowed to have concurrently. This is a performance issue. If this number is not enough, it might cause some tests to delay, until one of the connections becomes available.

If it's a UNIX or Linux session then it will appear like this:



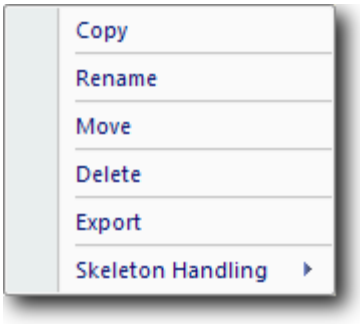
with the following additional options:

Timeout — For UNIX sessions determine how much time to wait after the collector performs a command.

SSH Parameters — For SSH connection, Event24x7 uses plink. You can specify plink parameters.

3.1.3.9 Handling Session Activities

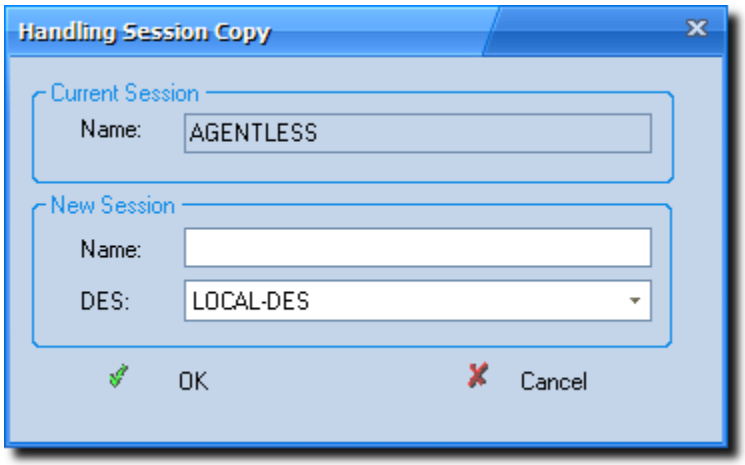
When selecting a session and pressing the mouse right button the following pop-up menu is opened:



Depending upon your selection, another dialog will be opened.

3.1.3.9.1 Copy Session

If you select the “Copy” option, the following screen will appear:

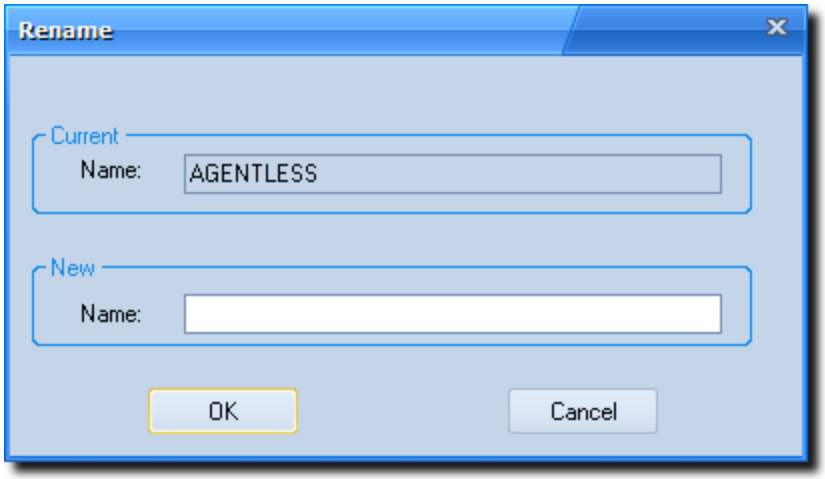


This dialog performs the following Session Operation:

Copy a session with all the Session’s components to a new one.
The copy operation copies the entire definitions (Monitors, Collectors and Parameters).

3.1.3.9.2 Rename Session

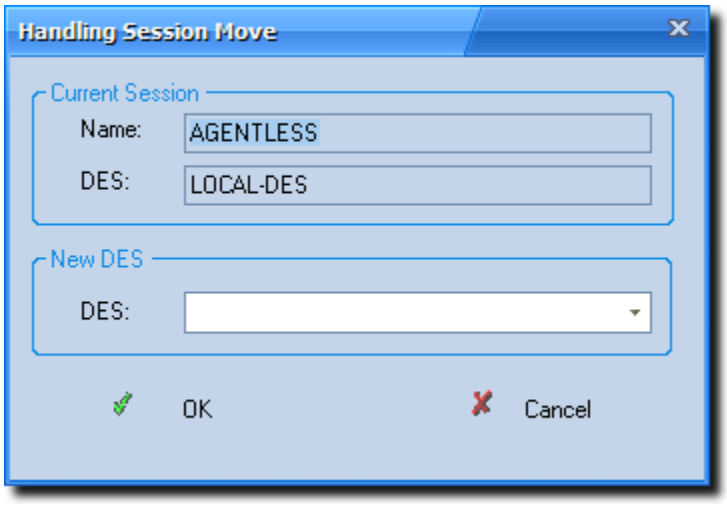
If you select the “Rename” option the following dialog will appear:



Rename the selected session to a new name.

3.1.3.9.3 Move Session

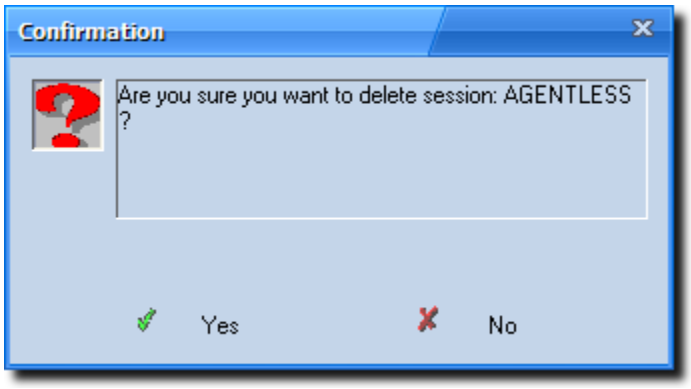
If you select the “Move” option the following message box will appear:



Move a session with all the Session’s components to another DES.
The move operation includes the entire definitions (Monitors, Collectors and Parameters).

3.1.3.9.4 Delete Session

If you select the “Delete” option the following message box will appear:

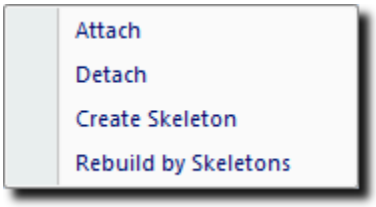


Delete the session and all the Session’s components.

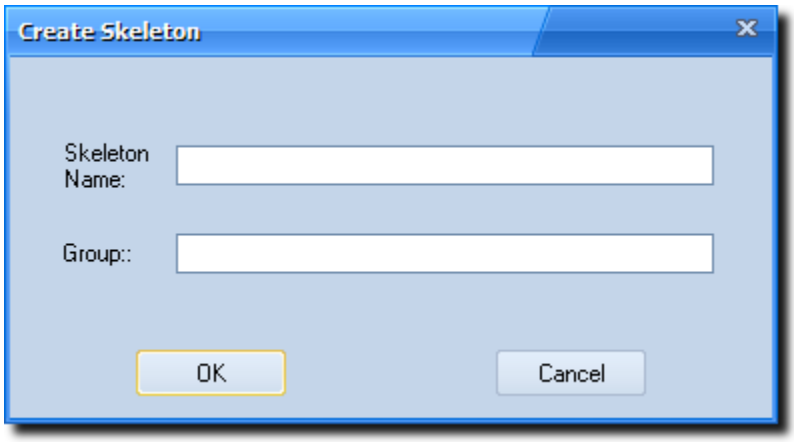
3.1.3.9.5 Export Session

If you select the “export” option, the session with all its components will be exported so that they can be copied to a different Event24x7 installation by using the Import command.

3.1.3.10 Handling Session Skeleton Activities



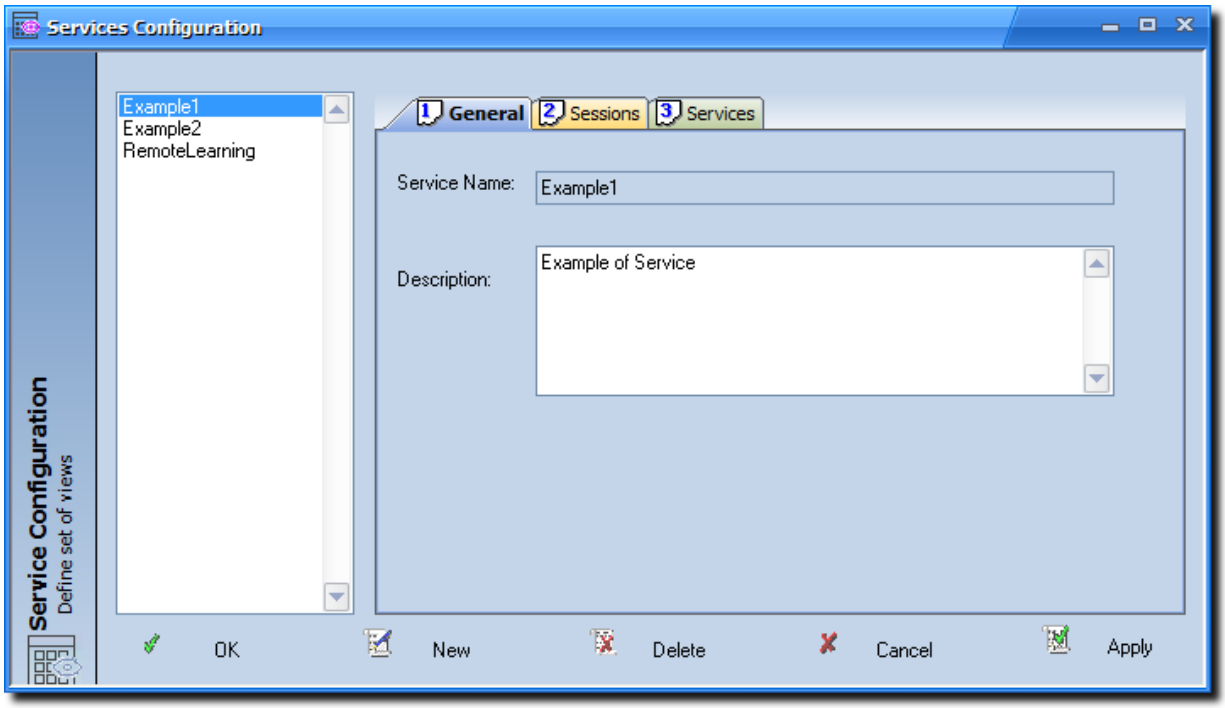
If you select the “Create Skeleton” option the following message box will appear:



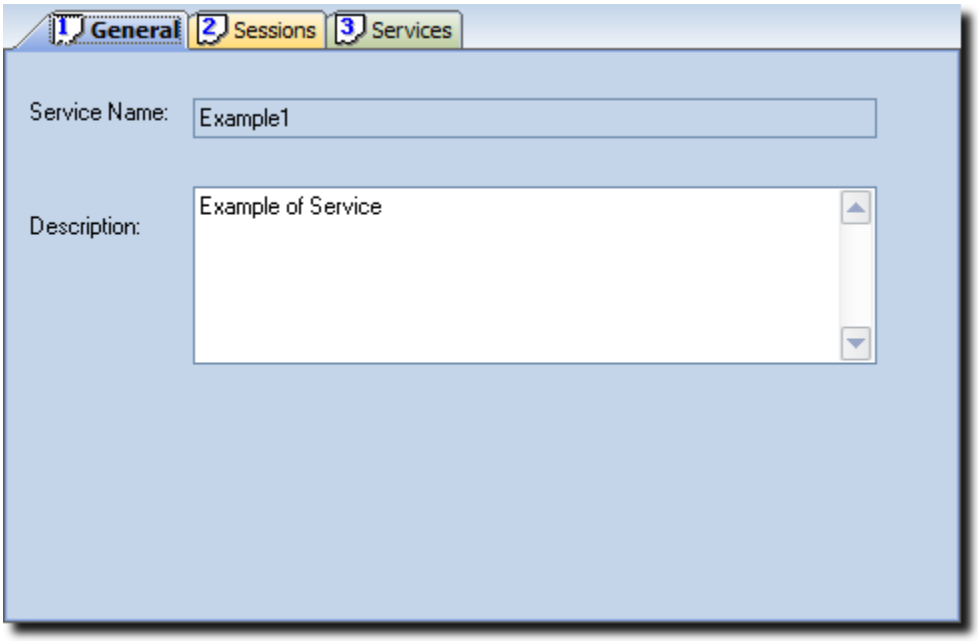
Create Skeleton	Create a Skeleton from current session with all of its definitions and monitors, collectors and parameters.
Attach	Mark this session as built from the skeleton
Detach	Detach Skeleton from this Session
Rebuild by Skeletons	Rebuild the Session from its Skeletons

3.2 Service Configuration

Service is a logical view that combines sessions and optionally other Services.
It provides the ability to monitor the organization at the Service level instead of the Session level.



3.2.1 General Tab

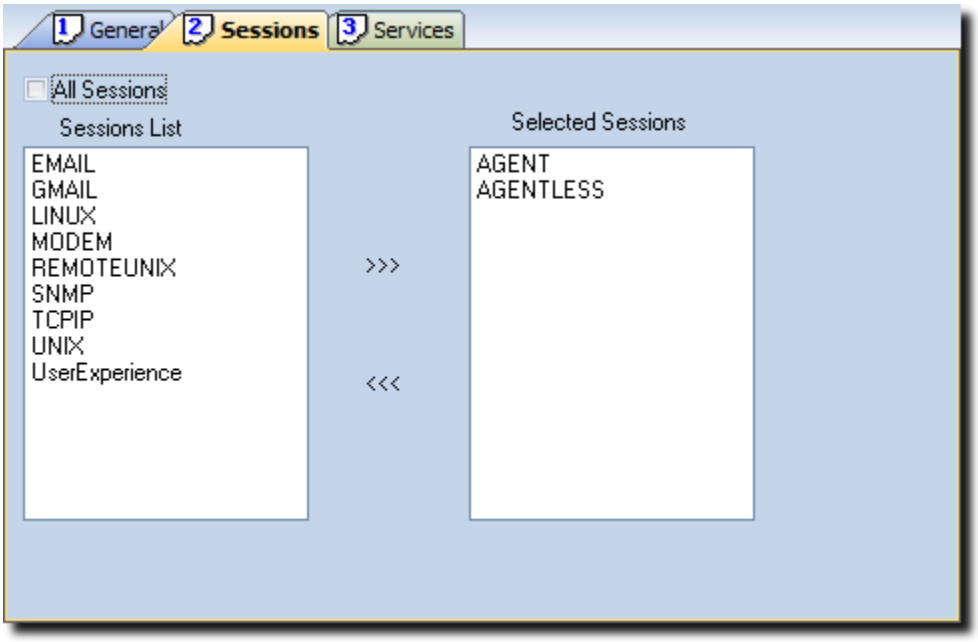


Service Name Unique identifier of a service.

Description User's description of the service.

3.2.2 Sessions Tab

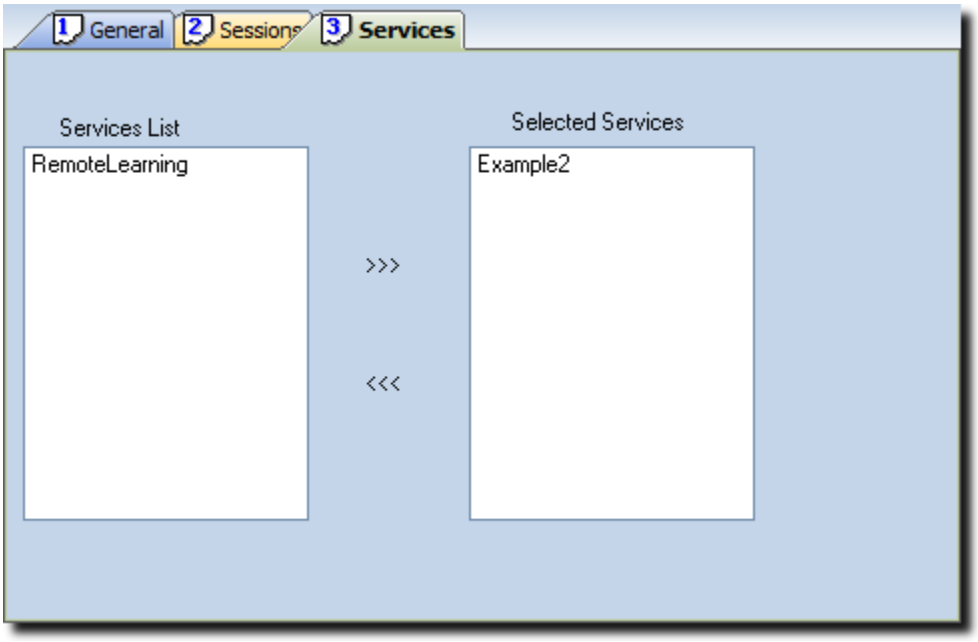
Add sessions to the service



All Sessions	Set this field to include all defined sessions in the service.
Choose sessions manually	Select desired sessions from the **Sessions List** and move them to the **Selected Sessions** list. The action is done with the direction arrows: ">>>" and "<<<" buttons. You can select multiple sessions in each transfer.

3.2.3 Services Tab

Add services to the service

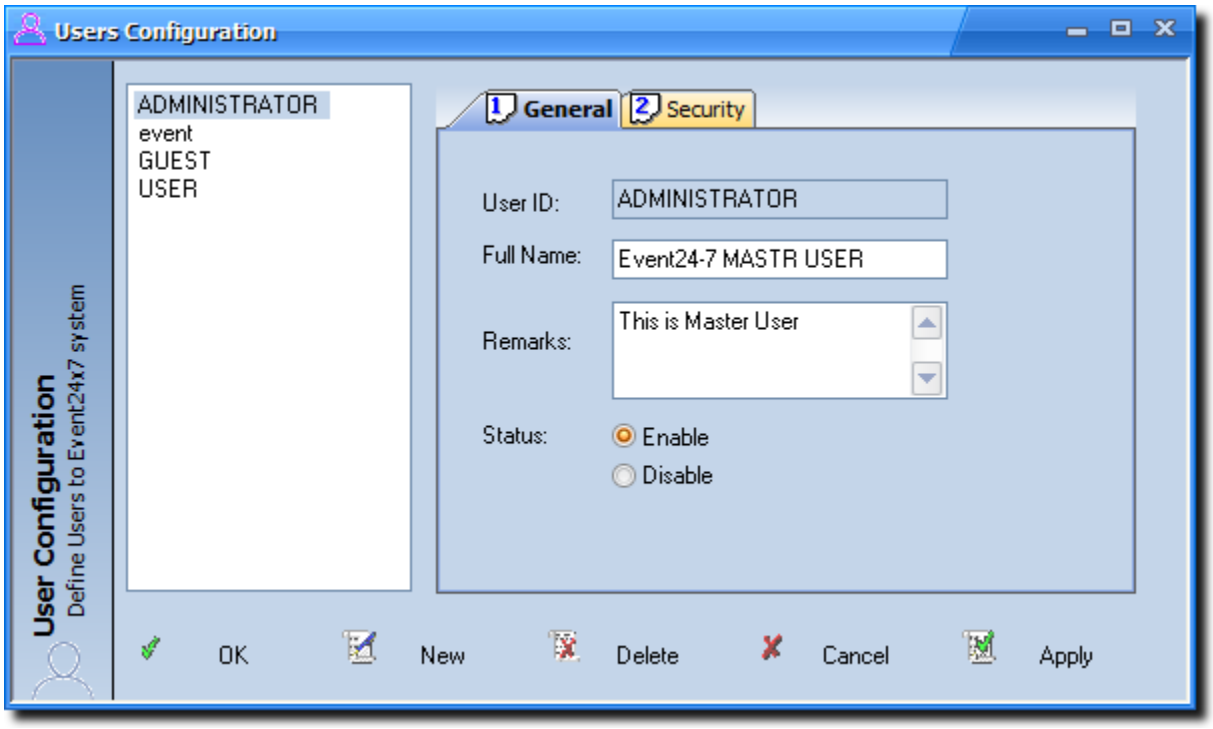


Choose services manually

Select desired services from the **Services List** and move them to the **Selected Services** list. The action is done with the direction arrows: ">>>" and "<<<" buttons.
You can select multiple services in each transfer.

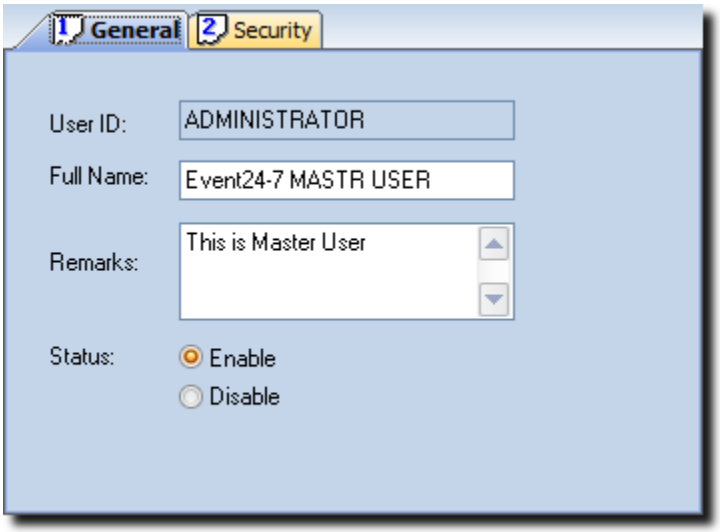
3.3 User Configuration

Users Configuration defines the names and descriptions of users in the Event24x7 system.



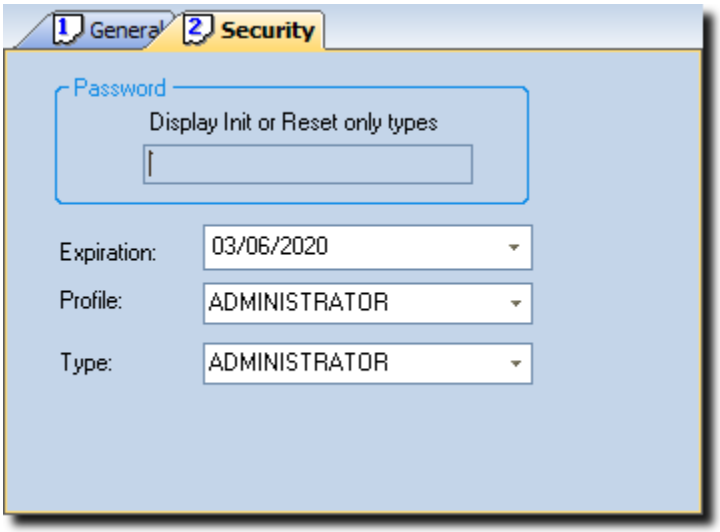
The Users configuration screen left pane contains the defined user list.
The right pane of the screen defines the user's parameters – user's name and description and security profile.

3.3.1 General Tab



User ID	Unique identifier of a user
Full Name	User's full name.
Remarks	Detailed description or remarks about the user.
Status	User status. **Enable** – User is authorized to use Event24x7. **Disable –** User is not authorized to use Event24x7.

3.3.2 Security Tab



Password — User's Password.
For the existing user, this field remains empty.
It is used mainly for a new user. When creating a new user, it will display the user's initial password. Upon the first time the user will login, he will be forced to change his password.

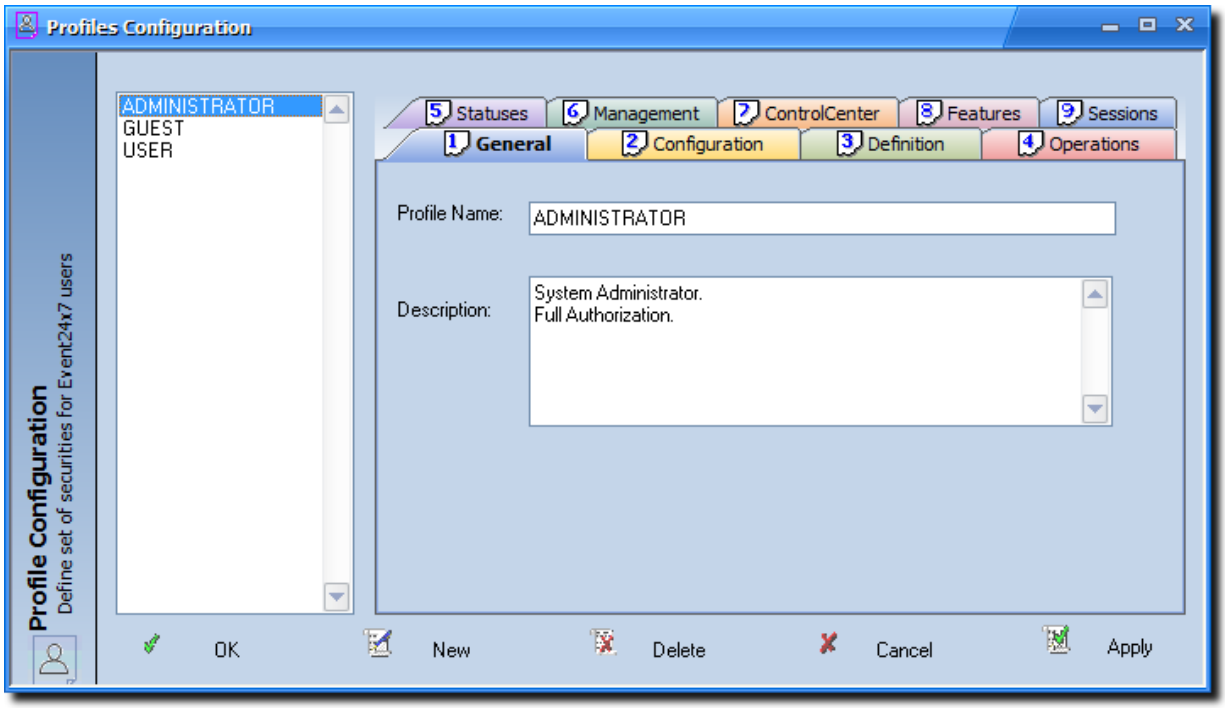
Expiration — User's expiration date.
Beyond this date, the user won't gain access to the Event24x7 system.

Profile — Relate the user to a defined Profile.
The Profile is the Security access level.

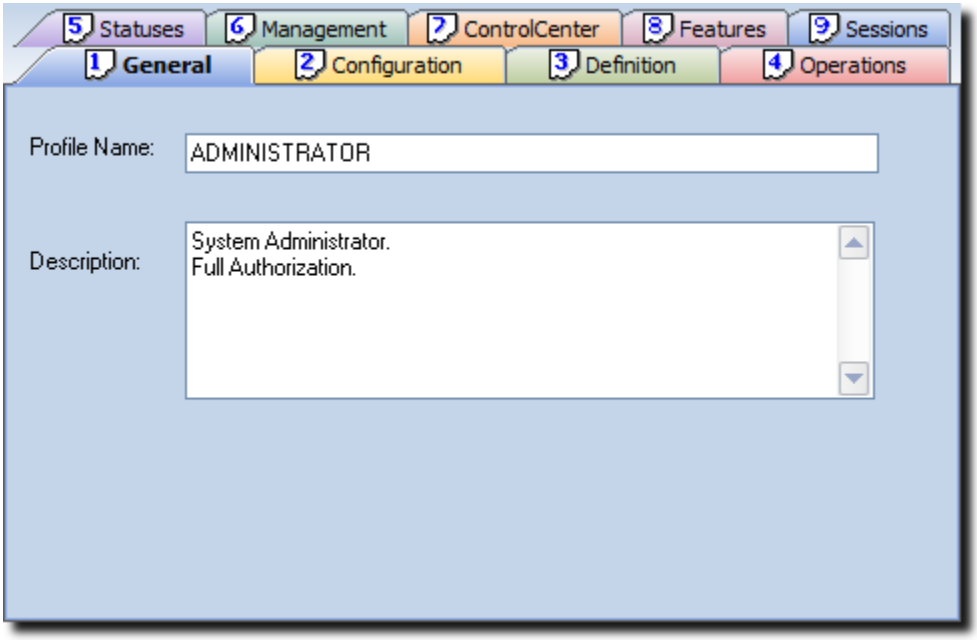
Type — Two types of users are defined: **Normal User** and **Administrator**.
The Administrator has more authorization compared to the normal user. For example, he can assign and reassign Alerts.

3.4 Profile Configuration

The User's profile defines a set of permissions for a user. All aspects of the Event24x7 system activities are controlled by the Profiles. A Profile determines whether the user has authorization for full control, may only view, or has no permission even to view it.

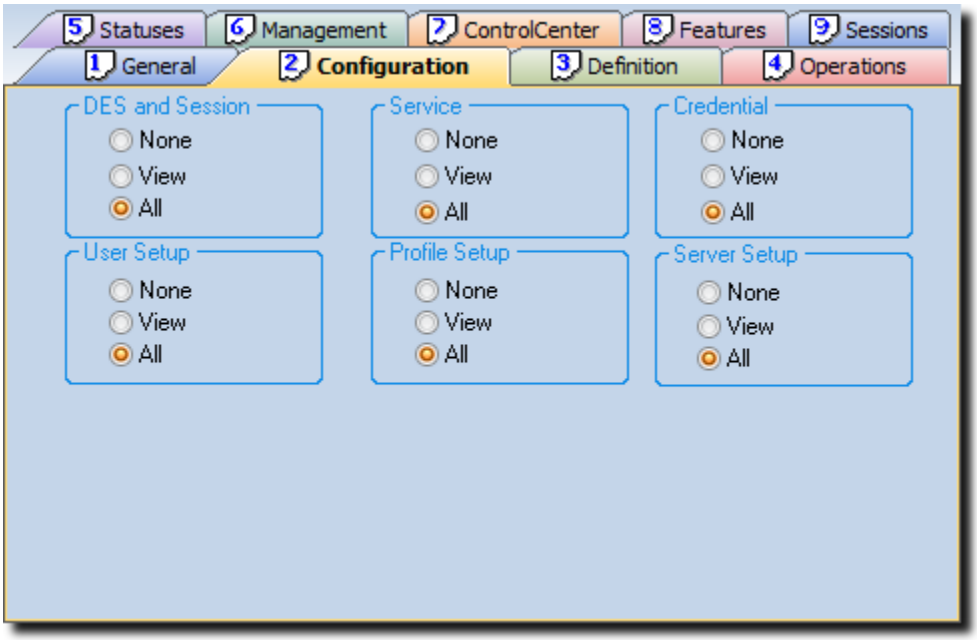


3.4.1 General Tab



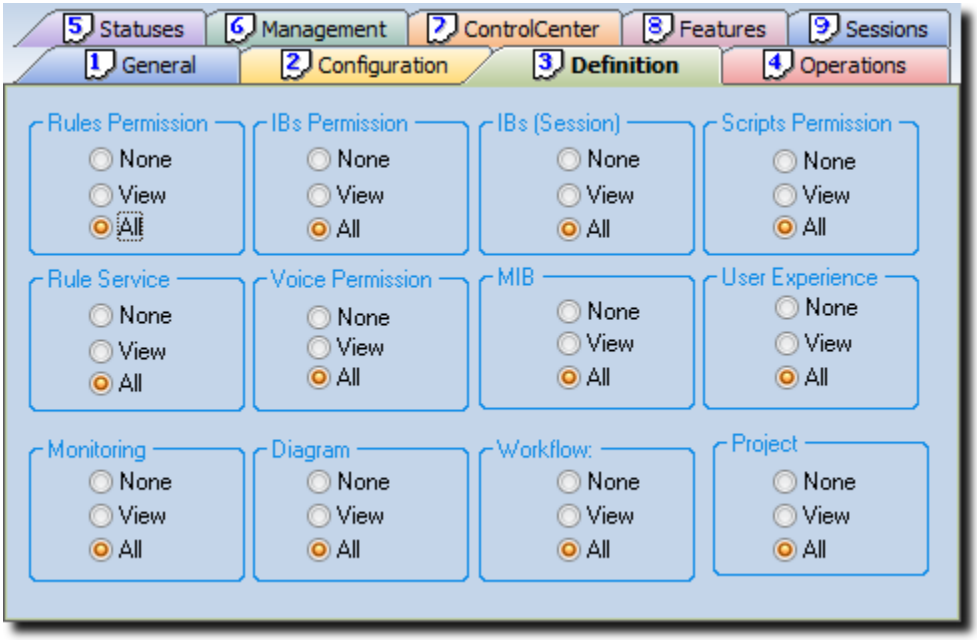
Profile Name Unique identifier of a profile, such as a job title.
Description A detailed description of the defined profile.

3.4.2 Configuration Tab



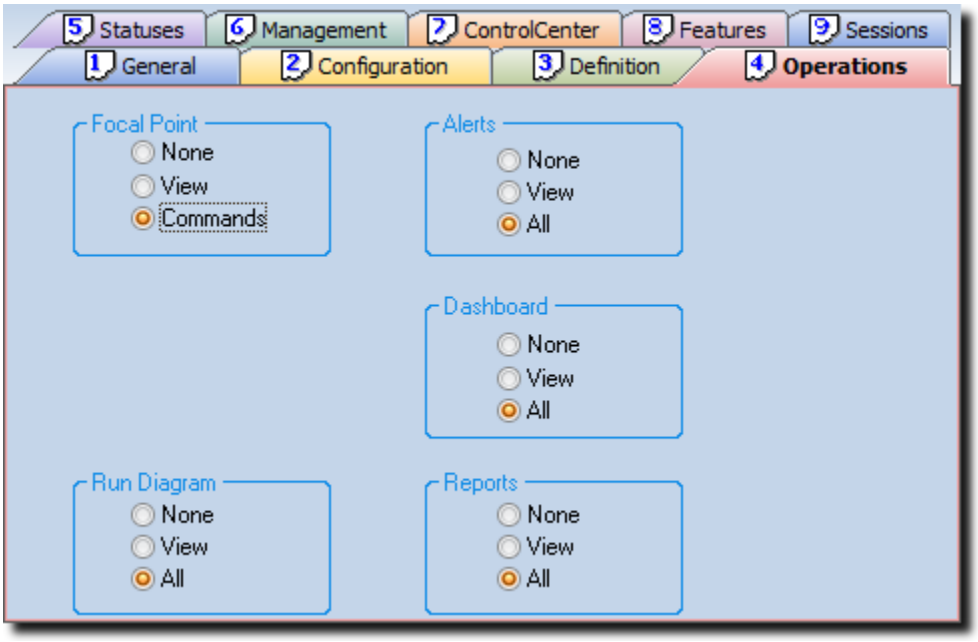
The Configuration Tab defines security levels for the items found in the Configuration part of the local Studio screen, including DES and Session, Service , User Setup, Profile Setup, Organization Structure, and Server Setup. The definitions affect only the local Studio in which it is defined.
Permissions may be None, View only or All – permission to view and modify.

3.4.3 Definition Tab



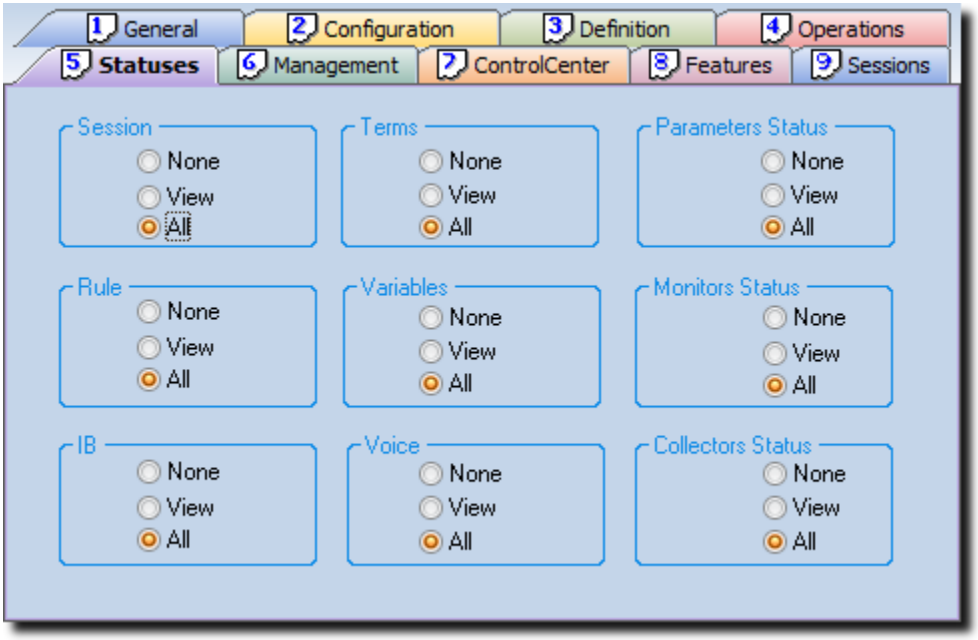
Definition tab is used to define security levels for the items found at the Definitions part of the Studio menu. It contains Rules Permission, IBs Permission, IBs (Session), Scripts Permission, Rule Service, Voice Permission, MIB, Monitoring, Diagrams, and User Experience. Permissions may be None, View only or All – permission to view and modify.

3.4.4 Operations Tab



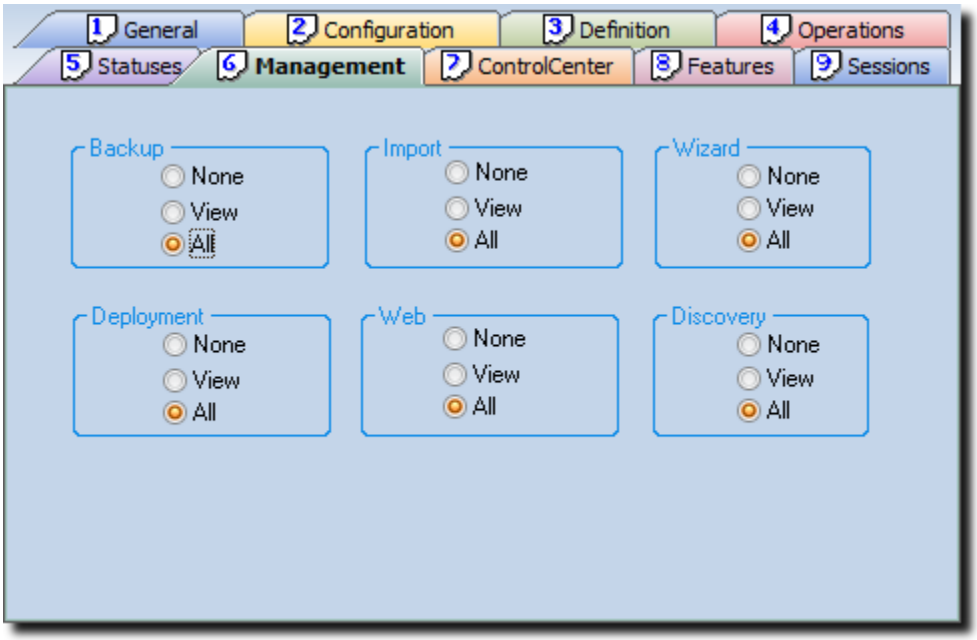
Operations tab is used to define security levels for the items found in the Operations part of the Studio menu, including Focal Point, Alerts, Dashboard, Run Diagram and Reports.
Permissions may be None, View only or All – permission to view and modify.

3.4.5 Statuses Tab



Statuses tab is used to define security levels for the Statuses items found at the Operations part of the Studio menu, including DES, Session, Rules, Variables, Terms and Voice. Permissions may be None, View only or All – permission to view and modify.

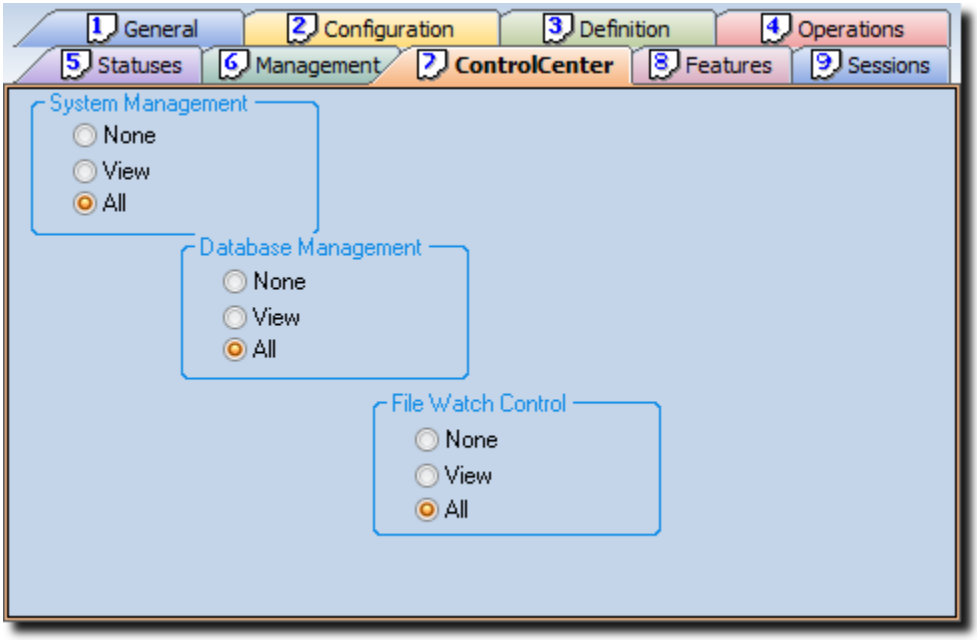
3.4.6 Management Tab



Management tab is used to define security levels for the Management activities of Event24x7.

Permissions may be None, View only or All – permission to view and modify.

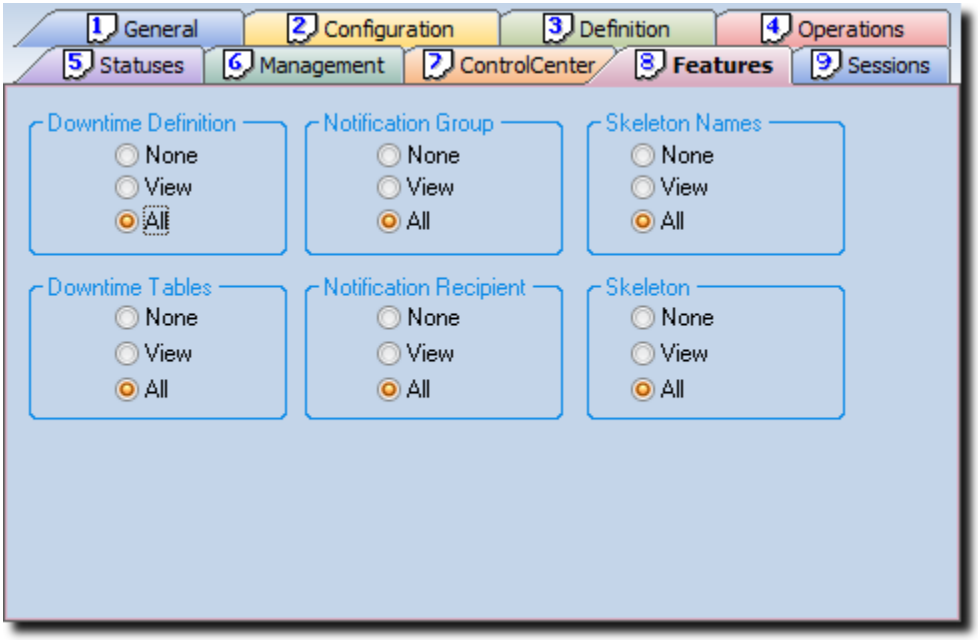
3.4.7 Control Center Tab



Control Center tab is used to define security levels for the Control Center activities of Event24x7.

Permissions may be None, View only or All – permission to view and modify.

3.4.8 Features Tab

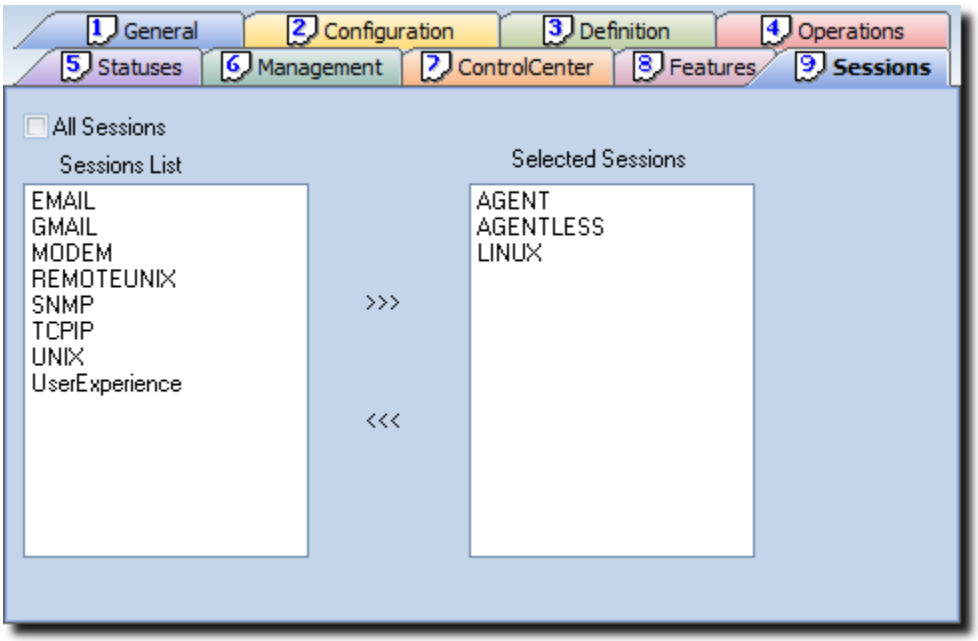


Downtime tab is used to define security levels for the Downtime activities and the Notification Group and Notification Recipient activities of Event24x7.

Permissions may be None, View only or All – permission to view and modify.

3.4.9 Sessions Tab

Sessions tab defines sessions that can be viewed by users that belong to this profile.



Two options available to select sessions:

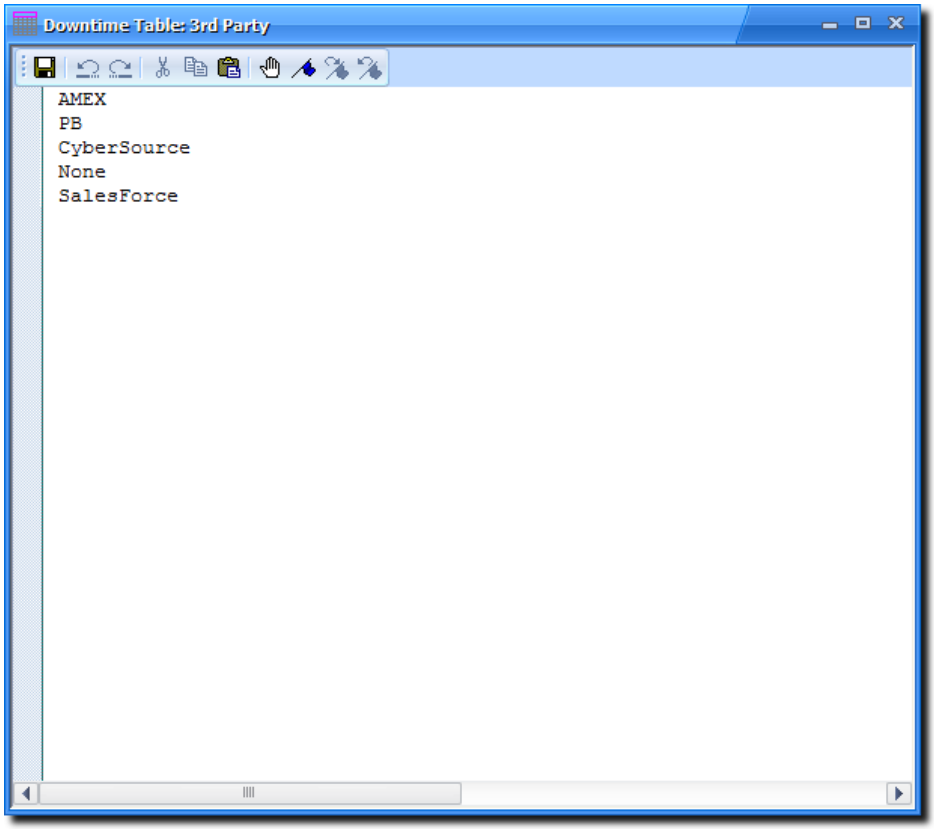
- **All Sessions**
  Authorize the profile to view all the sessions currently defined in Event24x7.
  When choosing this option all the other fields in this tab become gray and can't be set.

- **Choose sessions manually**
  Select desired sessions from the **Sessions List** and move them to the **Selected Session**s list. The action is done with the direction arrows: ">>>" and "<<<" buttons.
  You can select multiple sessions in each transfer.

You can select multiple sessions in each transfer. Only the sessions that are selected will be seen by users that have this profile.
All messages coming to CES (Central Event Server) will continue to pass through the Event24x7 Rule system.

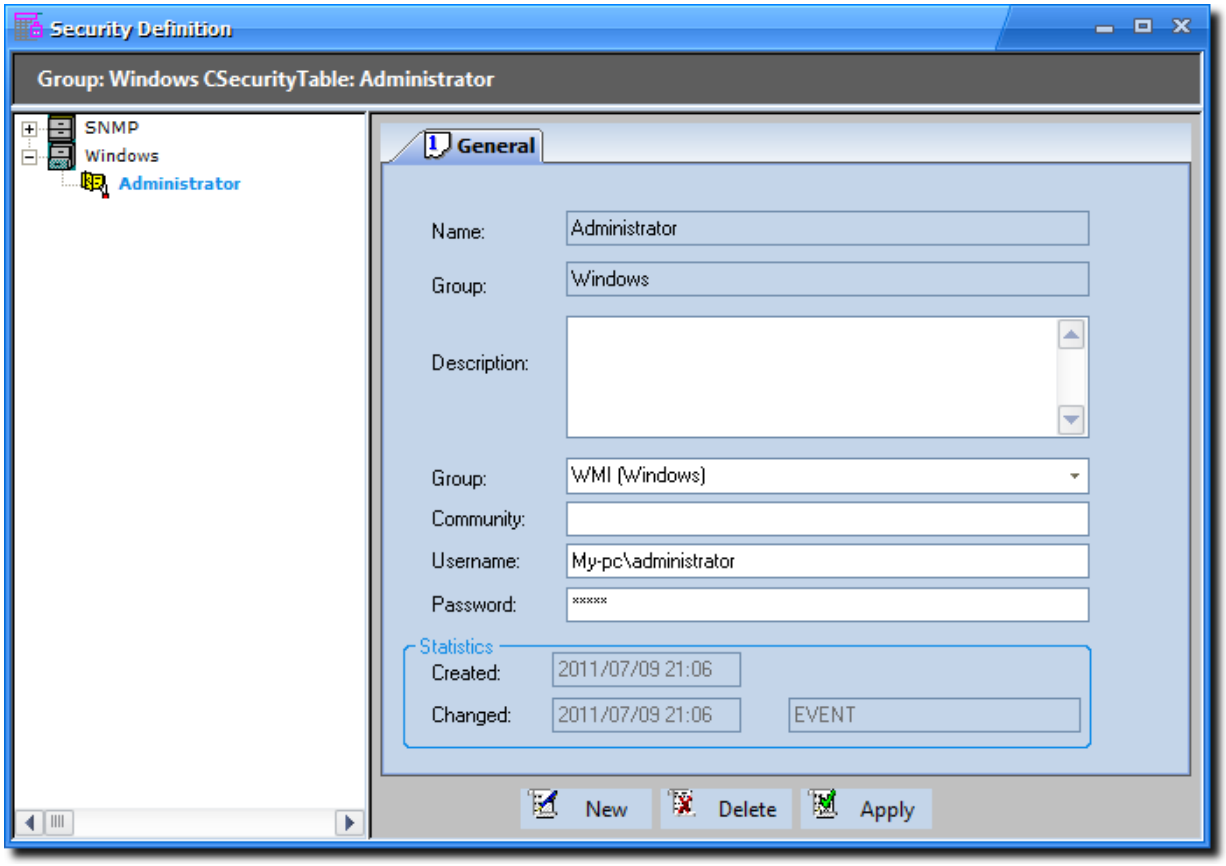
3.5 Tables

The Tables defines the options that are available for use in the Details Tab of the Downtime definition. In each table you specify values to be used in the relevant selection field inside the Downtime definition. Available tables are: Services, Entity, 3rd Party, Severity, Environment, Type and Machine Type.



3.6 Credential Table

The Credential Table defines login credentials in a centered location. These credentials can be used easily inside the login tab in each session configuration.
The Credential also used by the Discovery process. The Discovery try to perform login to investigated sessions by each one of defined credentials.



Group Define the credential type.
Available Groups:

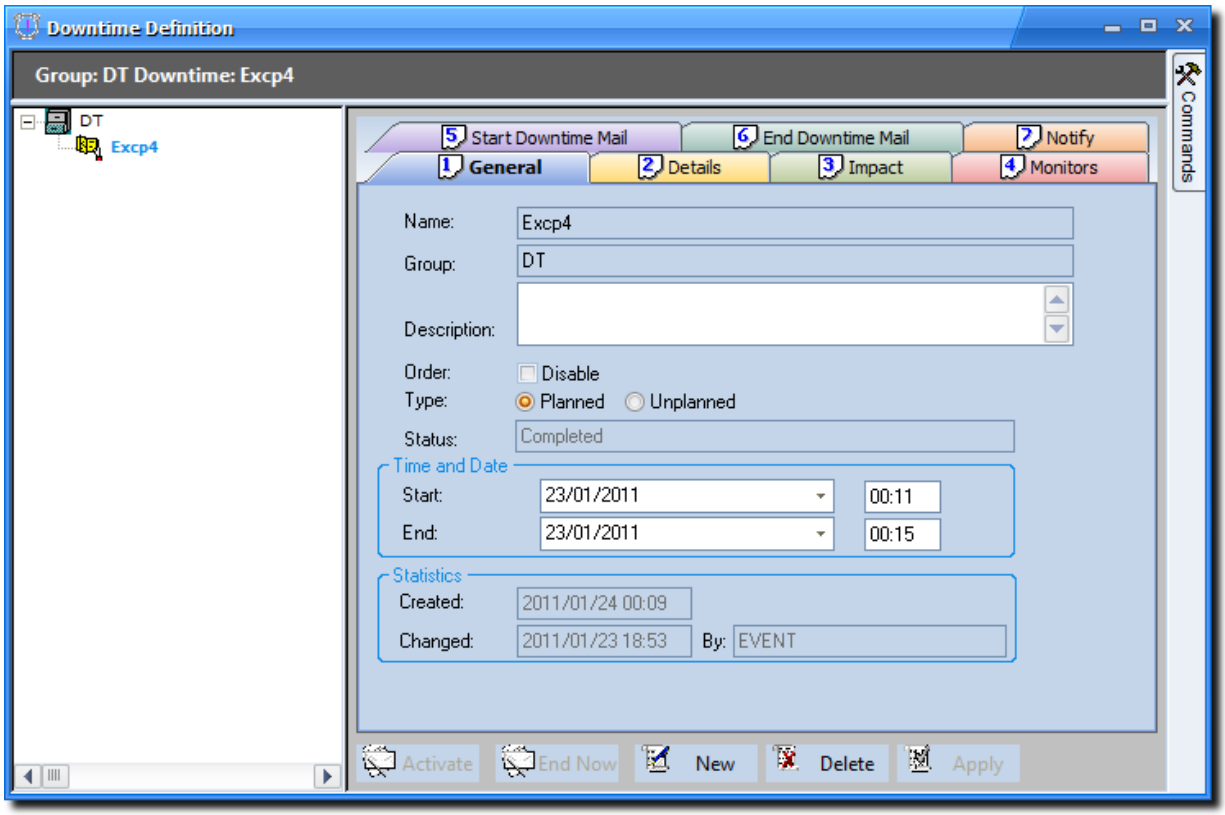
- SNMP
- SSH (UNIX, Linux)
- WMI

- WMI for Windows workgroup

3.7 Downtime

Define Downtime for Sessions and Monitors for a period of time, on which no collector will be active and no parameter will be performed.

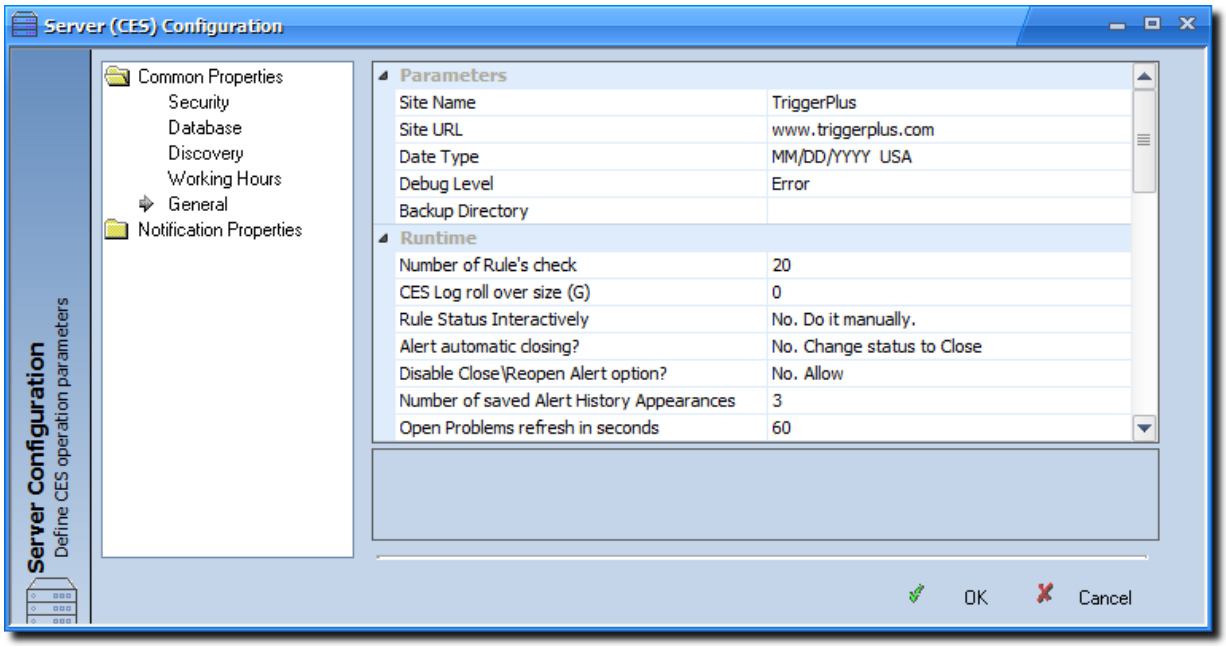
The Downtime operation allows you to set in advance, the date and time on which all monitoring for a specific session of even a specific monitor of a session will be disabled for a period of time. It allows you to select the sessions and monitors that will be included in this downtime. It can also send an automatic email on the start and end of downtime, as well as an email for notification.



For more information on Downtime, please refer to Downtime.

3.8 Server Configuration

The Server Configuration screen enables setting some of the Central Event Server (CES) parameters.



3.8.1 General Tab

Site Name — Enter the name of the organization that uses Event24x7. The Site Name will display also at the Event24x7 WEB part.

Site URL — The WEB site URL.

Date Type — Set the date representation, which determines how the date will be displayed.

Debug Level — In Event24x7, important messages are written to a log file, located at:
< **installation path**>**Log**\<server>_YYYY-MM-DD.log
Where:
YYYY-MM-DD represents the current date.
<**server**>_ represents Event24x7 Server name: CES, DES or RES.

Each day at 00:00 the log is replaced automatically by the Event24x7 server. The log file contains important messages for problem determination. More information is available on this subject in the Problem Determination chapter later in this manual.

This parameter sets the debug level. Available values:

Normal	Show only critical error messages. This is the default.
Warning	Show critical and warning messages.
Error	Show all messages

Backup Directory

Specify default location where to save backup. Backup command saves all the user's configuration files.
Backup command is part of the Management menu.
If no location is specified, the default location of the backup is
<CES installation>\Runtime\Backup.

Number of Rules Check

Number of concurrent processes that check Rules for triggering.
The default is one. Change this number only if you were advised to do so by Event24x7's technical support.

Alerts Automatic Closing

Change the automatic closing Alerts behaviors.
When problem was fixed and as a result the alert should be closed. The default action is to delete the alert. You can instruct Event24x7 not to delete the alert but change it's status to Closed.

Number of saved Alert History Appearances

Number of alert history appearances to be saved for each alert. Setting the number to 0 means that no history will be saved.

Rule Status Interactively

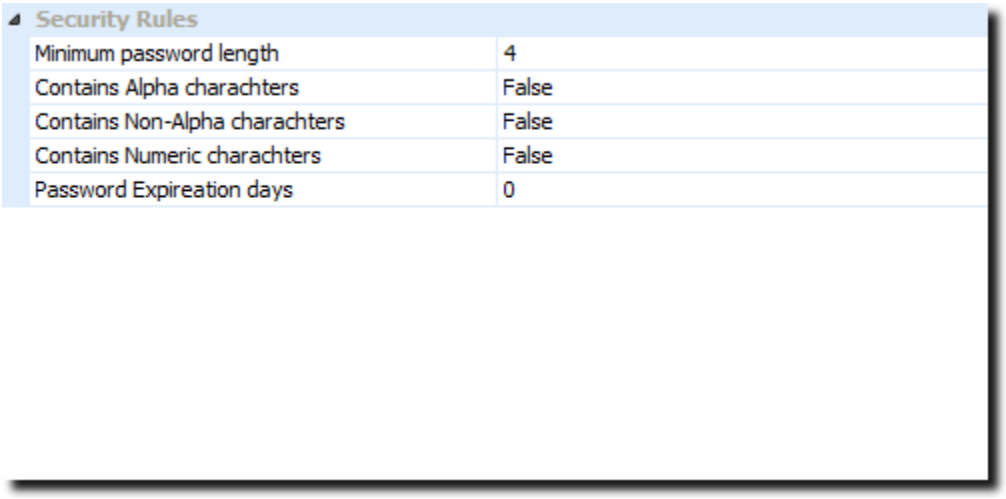
This is for performance consideration.
Rule Status dialog has a Count column that counts how many times the rule was executed. This parameter forces Event24x7 to update the count interactively when the Rule Status Dialog is open. Every time the Rule Status dialog opens, it displays the accurate Count field. When this value is set to "**No",** the count field will not be updated automatically.

Replace PrmState

Names The current states of Event24x7 are: Ok, Warning, Error and Severe. If you want to change these state names to other names (like “Severe” to “Fatal”) you can do it here. Once changed, you will receive notifications from Event24x7 Alert System with the new names.

3.8.2 Security Tab

The Security Tab forces the user to setup a new password according to the rules defined by Event24x7 which are similar to Windows.



Minimum password length Set the minimum password length.

Contains Alpha characters True value forces the password to contain at least one single Alpha character.

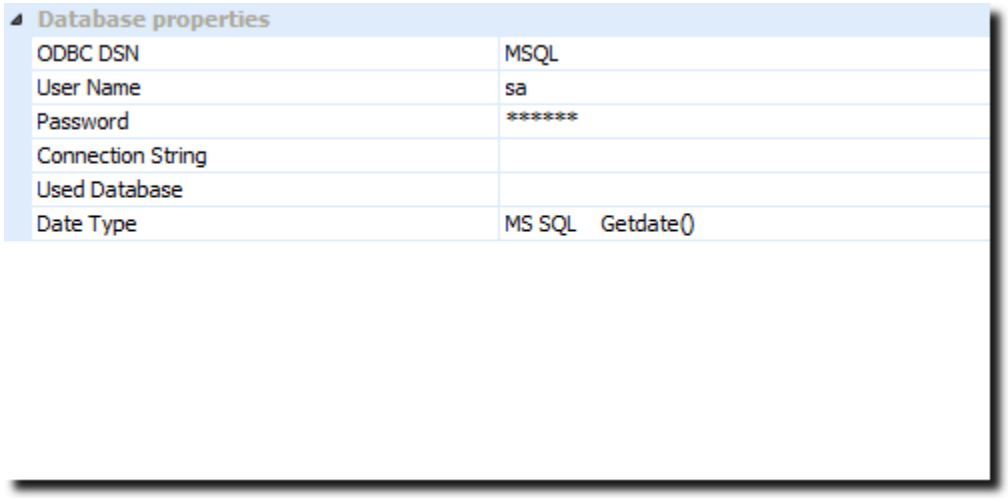
Contains Non-Alpha characters True value forces the password to contain at least one single Non-Alpha character.

Contains Numeric characters True value force the password to contains at least one single Numeric character.
Numeric characters are 1234567890.

Password Expiration days When the password expires the user will be forced to change it.

3.8.3 Database Tab

The Database Tab forces the user to setup the database authentication parameters needed to login to the database.



ODBC DSN — Use as a connection to ODBC definition.

User Name
Password — For authentication when logging into the database.

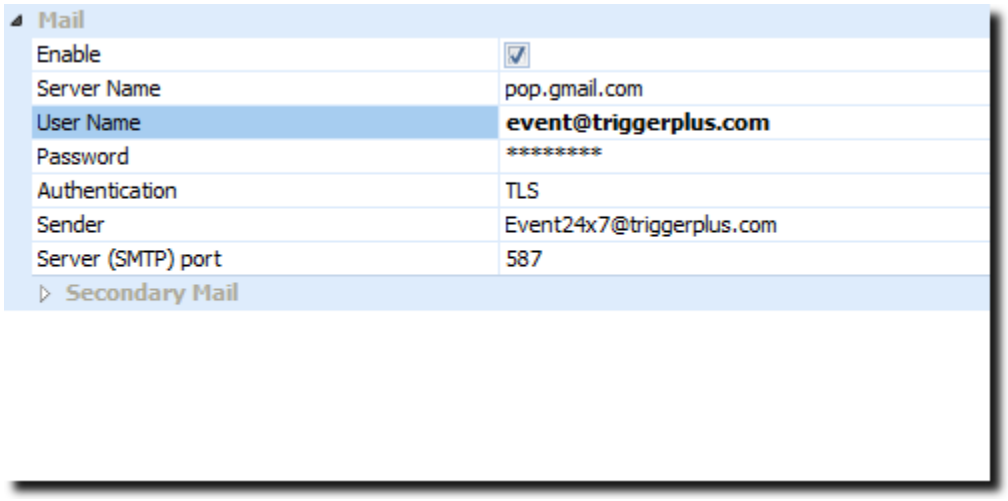
Connection String — Use this field for dynamic connection.
Specify the connection string you want Event24x7 to use.

Used Database — Specify the name if USE command needs to be done before opening the table

Date Type — The first field in the table is the Date field. Every database system has a different built in function to create this value. Specify which one you use.

3.8.4 Mail Tab

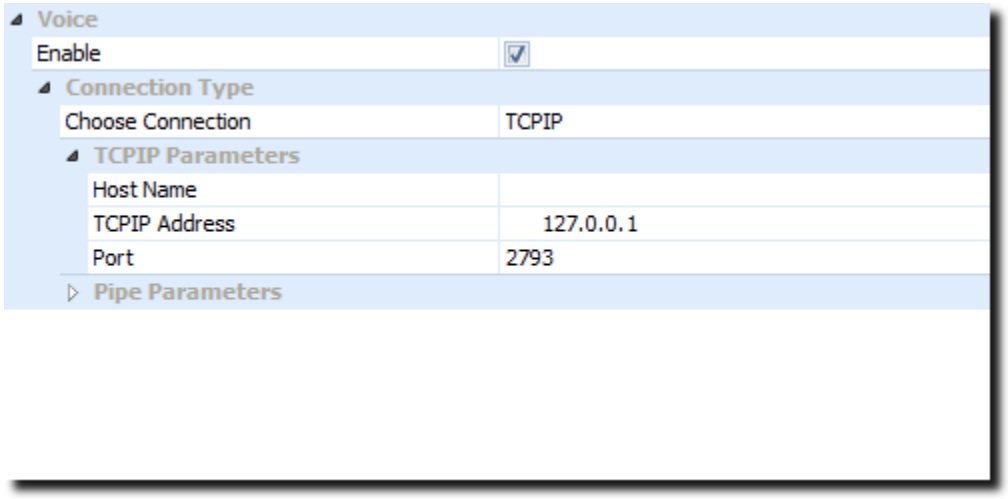
Sending email is one of the Rules activities in the Action! option.



Enable Mail	**Enable** or **Disable** sending mails. If this field is Disabled the Rule system will not send mail
Server Name	Your email server name.
User Name	Your user ID for the mail account.
Password	Your user password.
Authentication	Authentication type of the mail server
Sender	The Mail sender for outgoing mails.
Server (SMTP) Port	The default port used by SMTP is 25. Zero is treated as poet 25.
Secondary Mail	Define secondary mail. If sending mail to primary failed Event24x7 will send the same mail to the secondary defined.

3.8.5 Voice Tab

Enables using Event24x7 IVR capabilities.

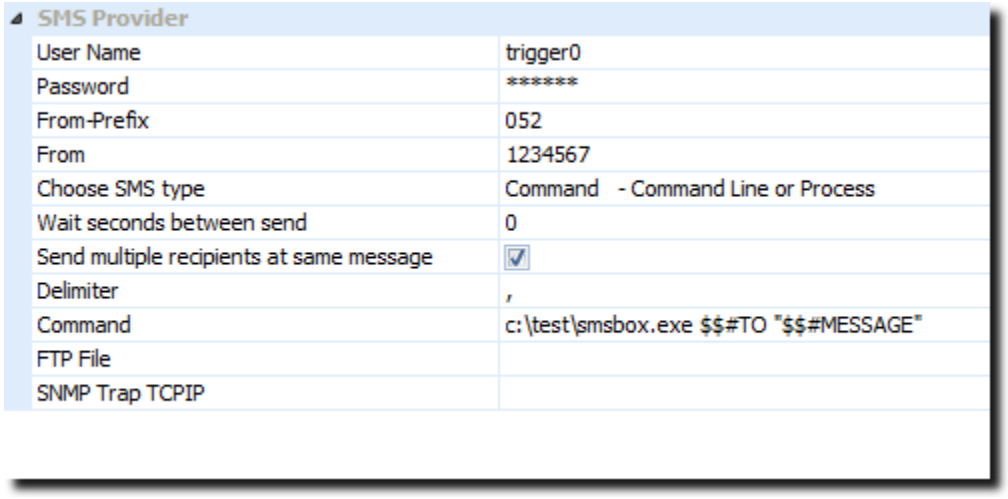


Enable Voice — **Enable** or **Disable** voice capabilities.
Using the required Voice Card.
Please refer to the EventVoice chapter.

Connection Type — Specify the location and connection parameters of the EventVoice server.

3.8.6 SMS Tab

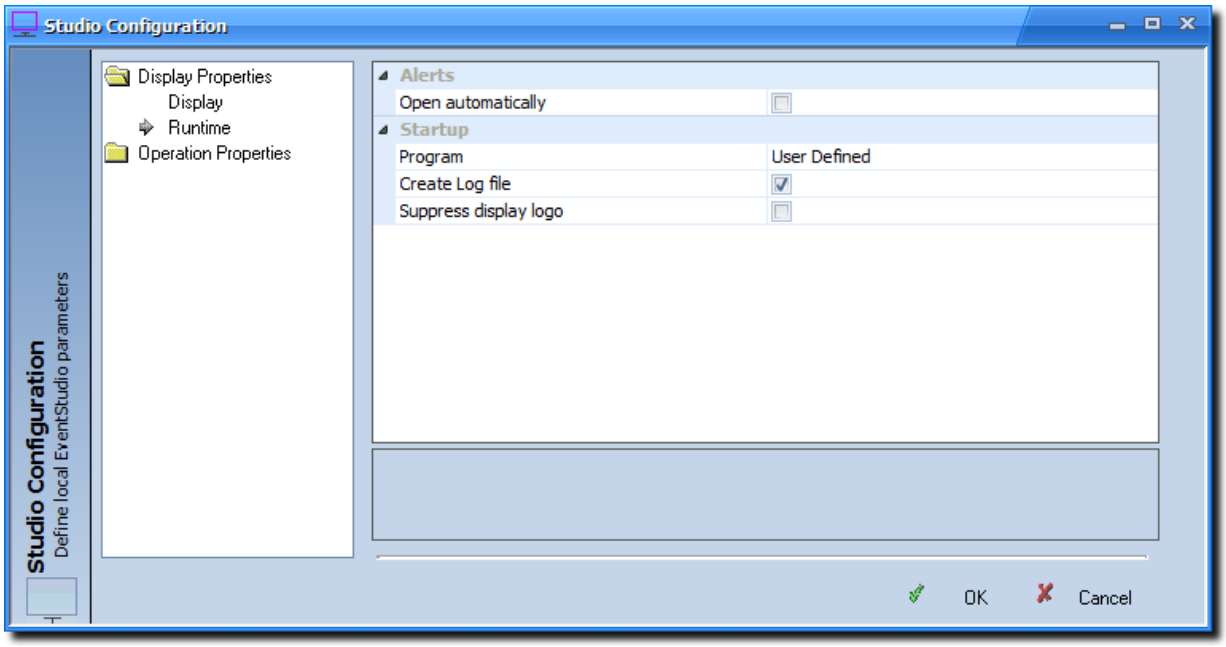
Event24x7 sends SMS as part of its notification Center.
The SMS feature can be configured to work with any SMS provider.



User Name	Your user name for the SMS provider account.
Password	Your user password.
From-Prefix	Sending number prefix (Example: 050)
From	Sending number (Example: 1234567)
Choose SMS type	Choose sending method. Options are: **SMS_API - Default** **Command - Command Line or Process** **VB Script - Execute VB or VBS script** **FTP - Put a file with FTP**
Command	The command to execute when sending SMS. The following System Variables (with $$#) are allowed: **EVENTINSTALL, USERNAME, PASSWORD, FROMPR, FROM, TO, MESSAGE.**
FTP File	SMS file structure. Select the structure of the file containing the details of the SMS. The following System Variables (with $$#) are allowed: **FTPFILE, FROMPR, FROM, TO, MESSAGE.**

3.9 Studio Configuration

The Studio Configuration feature allows you to change the appearance of your local Studio display.



3.9.1 Display Tab

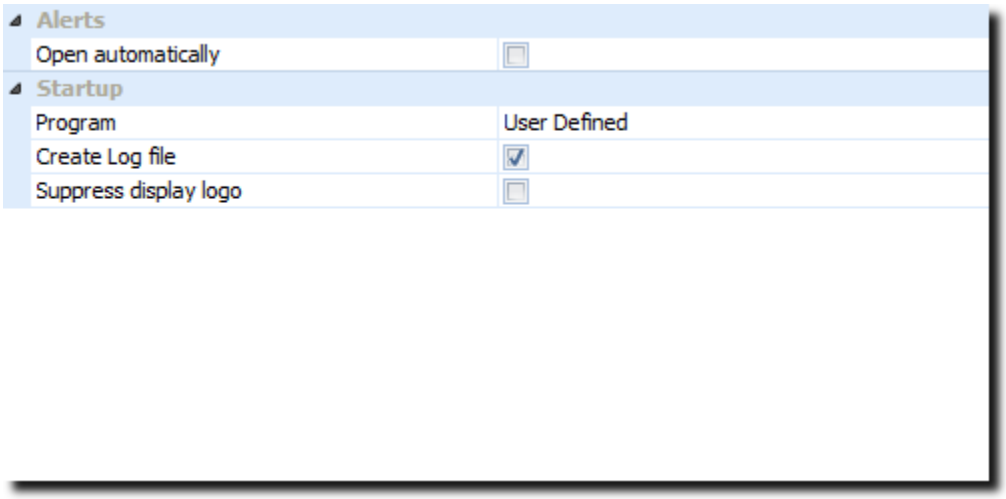
View Option — Choose the Studio background view.
Solid Color – The background will have a solid color.
Gradient – The background will have gradient effect.

Direction — Set the gradient direction. Available options:
top to bottom, **bottom to top**,
left to right, **right to left**.

Solid Color — Choose the solid color. The solid color will take effect only if **Solid Color** is chosen at **Choose view option**.

Color — Choose the base color for gradient option.

3.9.2 Runtime Tab



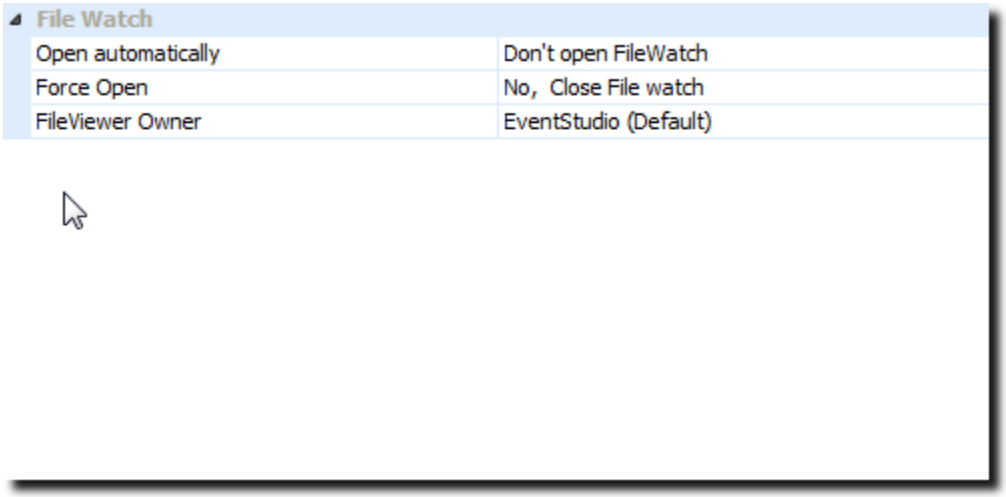
Open Automatically — Select to open Alerts Screen Automatically when a new alert message arrives to Event24x7

Program — Control what parts of the EventStudio are opened automatically when the EventStudio is started or the user pressed the Refresh button. The user can arrange the required parts on the EventStudio desktop.

Create Log file — Enables the Studio to create a log file similar to CES, DES and RES.

3.9.3 File Watch Tab

File Watch is part of the Control Center component of Event24x7.



Open Automatically — Select this option to open the File Watch control when the user starts the EventStudio.

Force Open — How to handle the File Watch control when the user closes the control.

FileViewer Owner — Choose Desktop only when EventStudio starts in non-display mode. This feature allows to hide the GUI but lets the File Watch control popup automatically whenever a new line arrives in one of the watched user log files.

3.9.4 Security

Compression	Select whether to compress the packets sent from the EventStudio to the CES.
Encryption	Select whether to encrypt the packets transferred between EventStudio and the CES

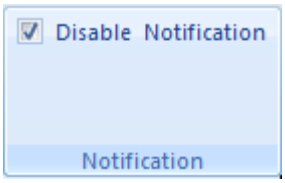
For more information about security aspects please refer to the Security chapter.

3.9.5 Values

Email Target	Default email To address. When defining the Action! mail command, the default mail will be inserted automatically into the To field.
User Log File	Default User Log file name. When defining Action! Log user command, the default file name will be inserted automatically into the file field.
ToolTip	When set, it displays a tool tip for the Action! Commands.

3.10 Disable Notification

The Disable Notification feature allows you to stop all notification from Event24x7. This means that no mails and no SMS will be sent from Event24x7 for as long as the checkbox is checked. Once un checking it, all the notifications will return to normal state and will be sent if ordered.



4. Definitions

The Definition section encompasses all the screens that the user defines in the Event24x7 solution for his environment. It contains all the checks and activities that Event24x7 performs.

- Manage by exception mode:
  - Rules.
  - Information Base.
  - User Experience
  - Scripts
  - Voice
  - Mib
  - Service
  - File Watch and Exception Monitoring

- Workflow

- Pro Active Approach mode:
  - Pro Active Monitoring Definition

- Skeletons

- Diagram
  - Diagram definition.
    Diagram is the tool that lets you define the network graphically in a Visio style.
    It has two parts: Definition and Run time.
    The Diagram is described in detail in a separate Chapter.

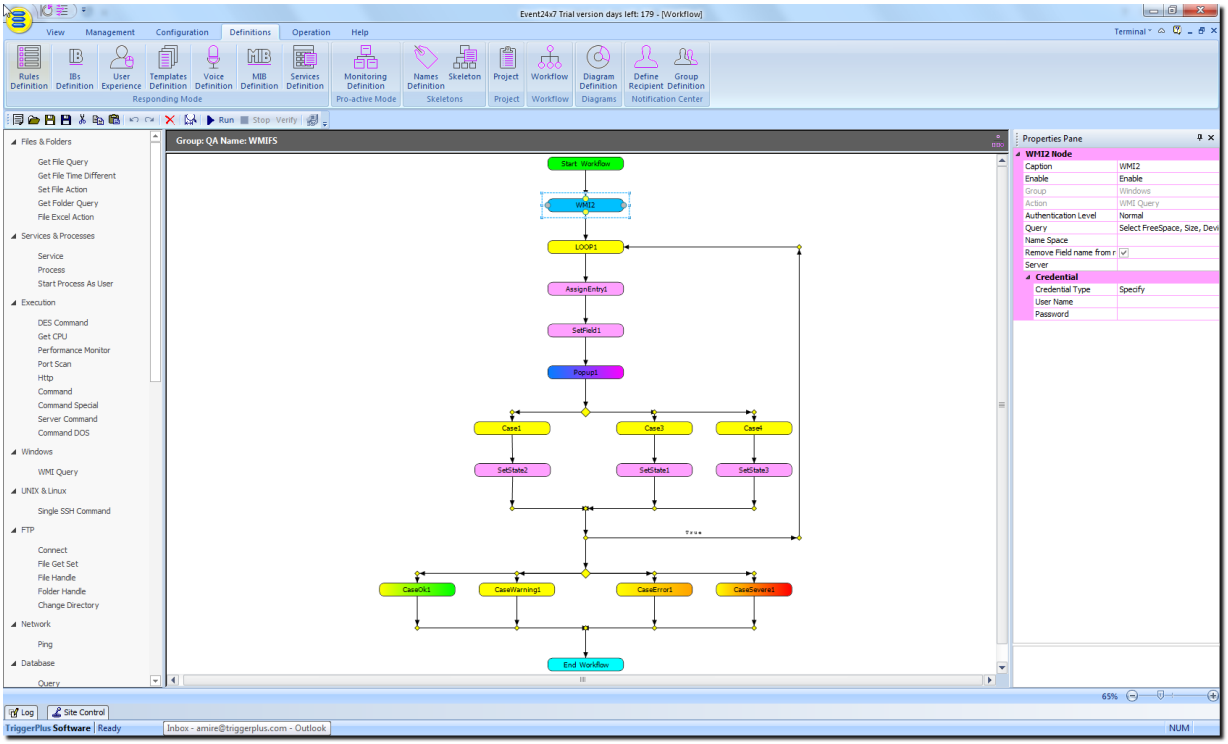
The definition options can be accessed from the Definition pull-down menu on the Studio screen.

4.1 Workflow Definition

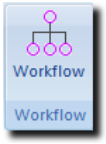
Event24x7 Workflow is a new and powerful module providing a simple way to monitor and manage complicated processes. The new Event24x7 Workflow module integrates all of Event24x7 outstanding capabilities in an easy-to-use graphical interface.

Drag and Drop capabilities makes it is easy to design even the most complex scenarios. Integrated with Event24x7 large number of actions, this module becomes extremely powerful and effective.

Event24x7 Workflow can be used in order to monitor simple objects, like processes or services on a given server or to execute a much more complicated scenario like an entire business process tailored specifically for your organization.

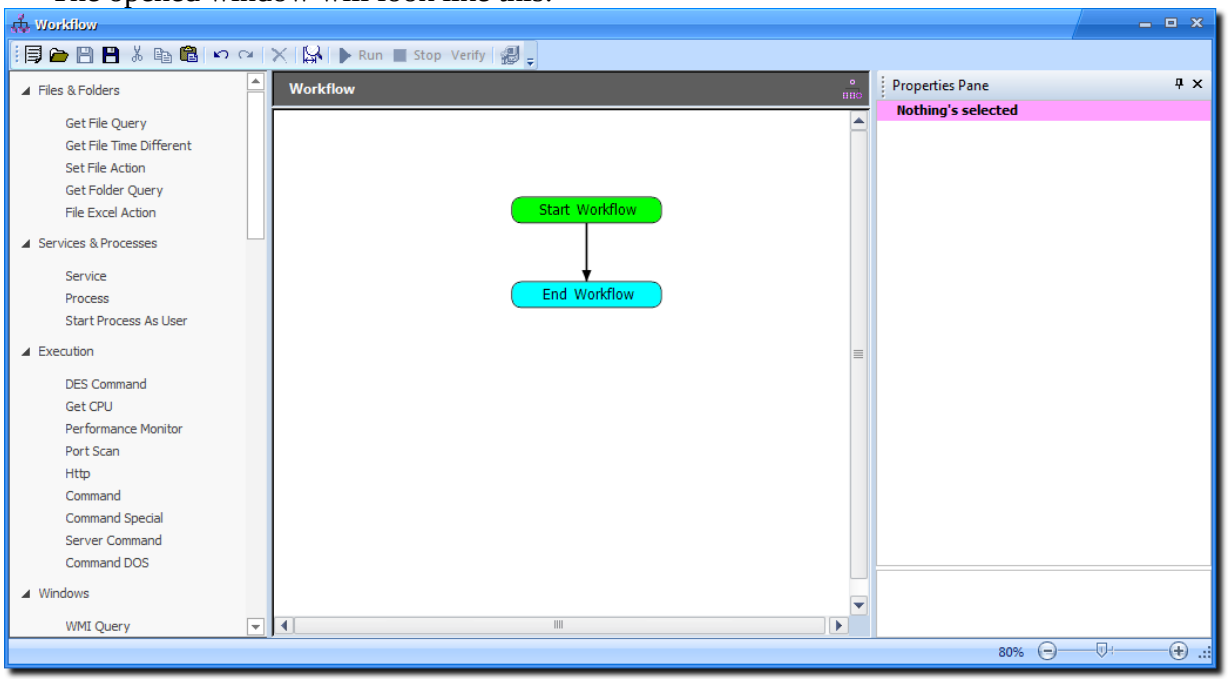


4.1.1 Getting Started

- Opening Workflow is done by selecting the Workflow Definition 

from the Definitions menu.

- The opened window will look like this:



- The Workflow screen has three parts:

  - **Workflow Toolbox**
    The Toolbox is located at the left pane of the screen and displayed in a tree structure. It contains the list of all the predefined Workflow Activities, organized by groups. A group is a logical unit sharing some common content for the Workflow Activities within this unit.

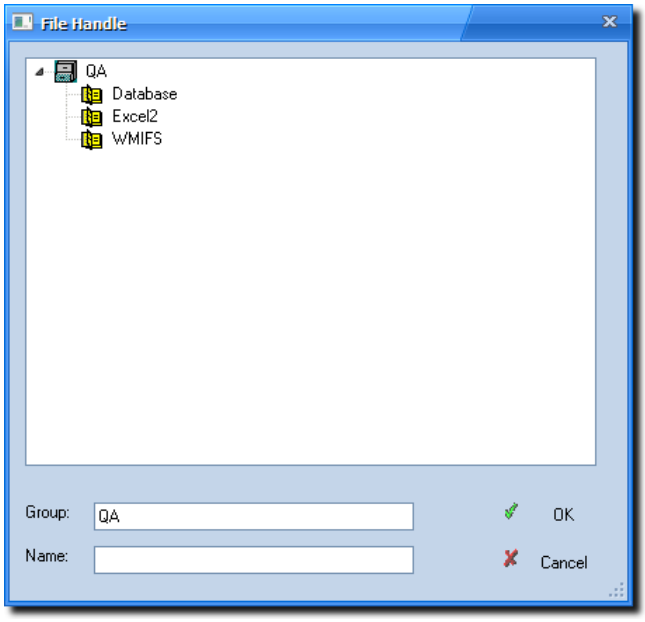
  - **Workflow Definition**
    The Workflow definition pane is at the center of the screen.
    In this section the Workflow flowchart is created.

  - **Workflow Properties**
    The Workflow properties pane is at the right of the screen.
    This section is used for providing the specific properties for each one of the workflow activities.

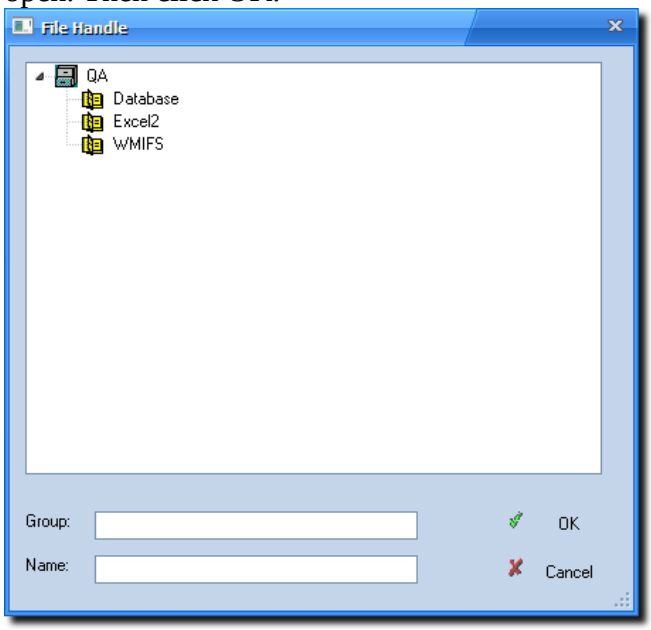
- **Workflow screen operation buttons**

New		Create a new workflow.
Open		Open an existing workflow.
Save		Save current workflow.
Save As		Save current workflow with different name.
Cut		Cut a single workflow activity.
Copy		Copy a single workflow activity.
Paste		Paste a workflow activity.
Undo		Undo do last change.
Redo		Redo last change.
Delete		Delete selected activity.
Fit to Window		Automatic fit workflow to screen.
Run	Run	Run current workflow.
Stop	Stop	Stop current running workflow.
Verify	Verify	Verify workflow's activities names and connections.
Setup		Setup workflow's appearance.

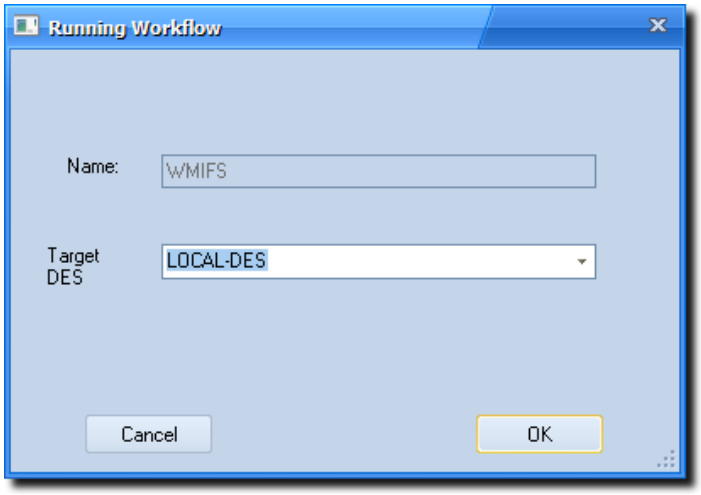
- **Save Workflow As**
  Click the Save As button from the operation buttons and select the Group name and the Workflow name. Then click OK.



- **Open Workflow**
  Click the Open button from the operation buttons and select the Workflow name to open. Then click OK.



- **Run current Workflow**
  Click on the Run button from the operation buttons and select a target DES for the workflow to run on. Then click OK.
  The workflow will be sent to the selected DES and will be executed.
  You can see it on the Parameter Dashboard tree under Workflow and the DES name.



4.1.2 Results

When cube ended it might has one of three optional output results:

- None
  There are actions like Set from Assign group that don't have any output.

- Boolean
  There are actions like Ping command, that the output is Boolean for success or failure.
  The result of this cube can be checked with IF Statement cube by special variable.
  The condition: `$$:node:SUCCESS` result TRUE if node results was true.

- Values
  There are actions like File Size that return a value as a result.
  There are actions like WMI or Database Query that might return multiple lines of values. Workflow automatically keep this result for later use.
  The Workflow allow to access every line in a loop. The proper way is to perform While Statement from the Flow group to iterate every line from the result. Using Assign Entry from the Assign group assign every iterated line into user variable.
  Look at the WMI workflow for example.

4.1.3 System Variables

- Workflow variable prefix is $$:
- General access is : $$:nodename
  Or
  $$:nodename:xxx
  Where xxx is line number of the group set or reserved word.
- Prev string when use as nodename refer to the previous node.

- Reserved word

  - Get indication if action succeeded.
    The value 1 for success or 0 for failed
    $$:node:SUCCESS

  - Get number of elements in groupset
    $$:node:Elements

  - For LOOP get index of current indices
    $$:node:INDEX

- Need way to access specific index
  $$:node:Line#

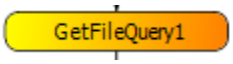
- Column
  $$:COLUMN:#

  Column held in special CstringArray defined

4.1.4 Activities

4.1.4.1 Files & Folders

4.1.4.1.1 Get File Query



Purpose	Get file attributes		
Fields	**Type**	File Exist? File Size Creation Date Last Modified Date Last Access Date	
	File	Full path and file name	
Results	Set SUCCESS for File Exist?		

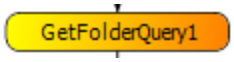
4.1.4.1.2 Get File Time Different

Purpose	Get file difference	
Fields	**File**	Full path and file name
	Requested Result	Different from current in seconds Different from current in minutes Different from current in hours Different from current in days
	Compare Date Type	Creation Date Last Modified Date Last Access Date

4.1.4.1.3 Set File Action

Purpose	Perform an action on a file	
Fields	**Requested Result**	Read Delete Copy Rename
	Source File	Full path and file name
Results	Set SUCCESS	

4.1.4.1.4 Get Folder Query



Purpose	Perform an action on a folder	
Fields	**Type**	Folder Exist? Creation Date Last Modified Date Last File Access Date Count Files Latest File Access
	Folder	Full path and folder name
Results	Set SUCCESS for Folder Exist?	

4.1.4.1.5 File Excel Action

Purpose	Handle Excel File		
Fields	**Requested Result**	Read – Read the entire Excel file into the csResult for line processing. Delete Copy Rename	
	Source File	Full path and file name	
	Has Header?	Check if the sheet has header line	
	Sheet	Sheet number to handle	
Results	Set SUCCESS		

4.1.4.2 Services & Processes

4.1.4.2.1 Service

Purpose	Handle Service	
Fields	**Type**	Start Stop Status Restart
	Service	Service name
	Server	Server name
	Retry	Number of retries
Results	Set SUCCESS	

4.1.4.2.2 Process

Purpose	Handle Process		
Fields	**Type**	Status Count Processes List Matches CPU Usage Virtual Memory Working Set Memory Kill Process	
	Process	Process name	
	Server	Server name	
	Credential Type	Specify Use Credential	
	Credential	User Name, Password Credential	
Results	Set SUCCESS for Folder Exist?		

4.1.4.2.3 Start Process As User

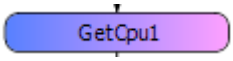
Purpose	Run a program under a specific user credentials. When a program must be started with a certain user credentials like a program that reads from SQL, and the SQL authentication is Login User.	
Fields	**Program**	Name and path of the program
	Parameters	Run time parameters for the program
	Directory	Directory path.
	User	User name
	Password	Password
	Domain	Network Domain name
	Profile?	Option to restore the User profile
	Environment?	Option to restore the User environment
	Use Gateway for Windows 2008	Send commands via Event24x7 Gateway
	Server	Event24x7 server upon which to start the program. This is transparent the program execution within its own servers.

4.1.4.3 Execution

4.1.4.3.1 DES Command

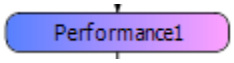
Purpose	Issue a DOS command from local DES	
Fields	**Command**	The command to issue.

4.1.4.3.2 Get CPU



Purpose	Get CPU usage of a server or a process	
Fields	**Type**	Usage
	Server	Server's IP or name
	Process	Process name or empty for total CPU usage

4.1.4.3.3 Performance Monitor



Purpose	Retrieve a Windows Performance Monitor counter value	
Fields	**Object**	Object name
	Counter	Counter name
	Instance	Instance name
	Server	Server name
	Cycles	Number of cycles
	Wait (mSec)	Default is 300 mSec
	Format	Long Double Large

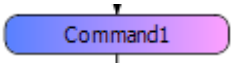
4.1.4.3.4 Port Scan

Purpose	Perform port scan.		
Fields	**Type**	Object type. Available options: **TCP** **UDP** **Both**
	Server	Server's IP or name
	Ports	Specifying ports: Single port to query (range 1-65535) List of ports to query <22,23,161> Range of ports <start:end>

4.1.4.3.5 Http

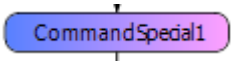
Purpose	Perform WinHttp or WGet command
Type	Available options: • Internal WinHttp Event24x7 perform GET and POST commands internally. • External WGet.exe Event24x7 executes the WGet utility. All the WGet options are available
Server	Server's IP to check or the command line for WGet
Proxy	Optional
Not Found	Not Found string that is returned from the web server. It enables Event24x7 to indicate a Not Found page
Find String	Optional. A string to locate in the return answer from the web server. If this option is used, the last line of the intermediate file returned from the collector contains an indication if all strings were found. List line has the format of: >>Result: OK Size= 1
Results	Set SUCCESS

4.1.4.3.6 Command



Purpose	Specify command or request to execute	
Fields	**Command**	The command's content should be adjusted to the target environment. It can be WMI command or SSH command,
	Session	Select on which session to apply the command.

4.1.4.3.7 Command Special

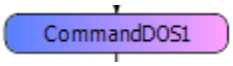


Purpose	Send a special command to a monitored session.	
Fields	**Command**	Choose a command to send from these available options: **ENTER**, **TAB**, **RESET**, **HOME**, **NEWLINE, Blank, BREAK, EOF** and a set of **Control-Key** commands**.**
	Session	The session to which the command is sent to.

4.1.4.3.8 Server Command

Purpose	Send Event to Focal Point	
Fields	**Message**	The message to send
	Server	CES or DES
Details	This is the Event24x7 command line. On the CES you can type any command at the Focal Point window that might trigger a What? Command rule. Actually only CES has a real Focal Point window. The Server Command lets you act like each DES has a virtual Focal Point as a command line. Same rule with What? Command active at DES will be triggered upon this Event.	

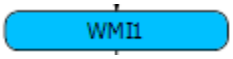
4.1.4.3.9 Command DOS



Purpose	Issue a DOS command from local DES	
Fields	**Command**	The command to issue.

4.1.4.4 Windows

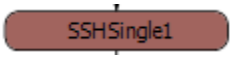
4.1.4.4.1 WMI Query



Purpose	Issue a WMI command	
Fields	**Authentication Level**	Normal High
	Query	WMI query to issue
	Name Space	Default is root\CIMV2
	Remove field name from result	Option to remove field name from result
	Server	Server's IP or name
	Credential Type	Specify Credential
	Credential	User Name and Password Credential

4.1.4.5 UNIX & Linux

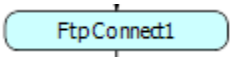
4.1.4.5.1 Single SSH Command



Purpose	Issue a SSH command	
Fields	**Command**	SSH command
	Port	Port number (default is 22)
	Server	Server's IP or name
	Credential Type	Specify Credential
	Credential	User Name and Password Credential
Results	Set SUCCESS	

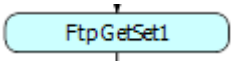
4.1.4.6 FTP

4.1.4.6.1 Connect



Purpose	Issue a FTP Connect command	
Fields	**Server**	Server's IP or name
	Port	Port number (default is 21)
	Credential Type	Specify Credential
	Credential	User Name and Password Credential
Results	Set SUCCESS	

4.1.4.6.2 FTP Get Set

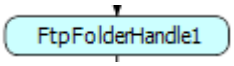


Purpose	Perform FTP file action		
Fields	**Type**	Get file Put file	
	FTP Path	FTP path	
	Computer Path	Computer path	
	File Name	File name	
	Transfer Mode	ascii binary	
Results	Set SUCCESS		

4.1.4.6.3 File Handle

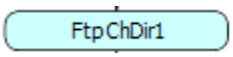
Purpose	FTP file handle	
Fields	**Type**	Exist? Rename Delete Minutes from last update
	File Name	File name
Results	Set SUCCESS	

4.1.4.6.4 Folder Handle



Purpose	FTP folder handle	
Fields	**Type**	Folder Details Number of Files Delete
	Folder Name	Folder name
Results	Set SUCCESS	

4.1.4.6.5 Change Directory



Purpose	Change Directory	
Fields	**Type**	Move one up Change current directory
Results	Set SUCCESS	

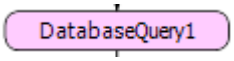
4.1.4.7 Network

4.1.4.7.1 Ping

Purpose	Preform Ping command	
Fields	**Server**	Target destination
Results	Set SUCCESS	

4.1.4.8 Database

4.1.4.8.1 Query



Purpose	Execute database query on the monitored session, for any database and any database user.	
Fields	**Query**	Database query
	Stored Procedure	Indicate whether the Command is actually a Stored Procedure
	Connection Type	Select connection type: **Use Connection String** **General, Use Defined ODBC** **Oracle OLE DB** **Oracle OLE DB .NET** **Oracle OLE DB Trusted Connection** **Oracle ODBC Driver** **Oracle Microsoft ODBC** **SQL ODBC** **SQL ODBC Trusted Connection** **SQL OLEDB**
	Alias	Connection's alias name
	Server	Server's IP
	Timeout	Time out in minutes for the query
	Credential Type	Specify Credential
	Credential	User Name and Password Credential
Results	Set SUCCESS	

4.1.4.8.2 Command

Purpose	Execute database query on the monitored session, for any database and any database user.	
Fields	**Command**	Database command
	Stored Procedure	Indicate whether the Command is actually a Stored Procedure
	Connection Type	Select connection type: **Use Connection String** **General, Use Defined ODBC** **Oracle OLE DB** **Oracle OLE DB .NET** **Oracle OLE DB Trusted Connection** **Oracle ODBC Driver** **Oracle Microsoft ODBC** **SQL ODBC** **SQL ODBC Trusted Connection** **SQL OLEDB**
	Alias	Connection's alias name
	Server	Server's IP
	Credential Type	Specify Credential
	Credential	User Name and Password Credential
Results	Set SUCCESS	

4.1.4.9 SNMP

4.1.4.9.1 Get

Purpose	Preform SNMP Get request	
Fields	**OID**	Object Identifier
	Community	Community name
	Target	Target IP
	Version	SNMP Version: 1 or 2

4.1.4.9.2 Get Next

Purpose	Preform SNMP Get Next request	
Fields	**OID**	Object Identifier
	Community	Community name
	Target	Target IP
	Version	SNMP Version: 1 or 2

4.1.4.9.3 Get Bulk

Purpose	Preform SNMP Get Bulk request	
Fields	**OID**	Object Identifier
	Community	Community name
	Target	Target IP
	Limit	Number of lines Default is 100
	Version	SNMP Version: 1 or 2

4.1.4.9.4 Send Trap

Purpose	Send SNMP Trap	
Fields	**Message**	Trap message
	Server	Select Event24x7 Server
	Port	Default port is 162
	Version	SNMP Version: 1 or 2

4.1.4.9.5 Send MIB Trap

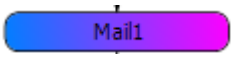
Purpose	Send SNMP MIB Trap	
Fields	**Message**	Trap message
	MIB Identifier	MIB name taken from MIB Definition screen
	Server	Select Event24x7 Server
	Trap Number	Values of the trap according to the MIB. Values should be separated by commas.
	Port	Default port is 162

4.1.4.10 Notification

4.1.4.10.1 Popup

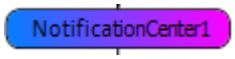
Purpose	Popup a window message on the Studio.	
Fields	**Message**	The main message to display
	Animation	Control how the popup window appears
	Animation Delay	Animation delay in milliseconds
	Show Delay	Show delay in milliseconds
	Theme	Type of popup window
	Transparent	Transparency of the popup

4.1.4.10.2 Mail



Purpose	Send email	
Fields	**Mailing Type**	Regular Address or Mailing List. Event24x7 Mailing list is saved in the Script Definition. For further information, please refer to the Script Definition section.
	To, CC	Email addresses.
	Data	Select between: **Specify** – insert content manually **Template** – use predefined template **Default** – use Event24x7 default mail
	Subject	Email subject.
	Message	Email content.
	Attachment	Optional attached file.
	Server	The mail server name.

4.1.4.10.3 Notification Center



Purpose	Use Notification Center to handle the alert.	
Fields	**Mode**	Sending mode. Available options: **Complete (Acknowledgement).** **Broadcasting.**
	Group Name	Group name for sending the notification to its recipients.
	Sending Order	Sending order. Available options: **Use Group Default** **According to On Duty Calendar** **According to Weekly Calendar** **Recipient Order** **Send to all Simultaneously**
	Notify Order	Notify order. Available options: **Use Group Default** **Only mails** **Mails and SMS** **Only SMS** **Start mail, Retries SMS** **Start mail, Escalation SMS**
	Message	Message to be sent
	DES Server	The DES server to be used for sending the notifications.

4.1.4.10.4 Display

Purpose	Display a message at the Focal Point.	
Fields	**Color Foreground**	Set the text color of the message
	Color Background	Set the background color of the message
	Message	Message to be displayed

4.1.4.10.5 Beep

Purpose	Play a beep on the PC internal speaker.	
Fields	**Frequency**	Frequency, in hertz, of the sound. This parameter must be in the range of 37 through 32,767 (0x25 through 0x7FFF).
	Duration	Duration, in milliseconds, of the sound.
Details	The **Beep** function generates simple tones on the speaker.	

4.1.4.10.6 Alert

Purpose	Create a new Alert in the Event24x7 alert system.	
Fields	**Operation**	Choose the operation Add, Update (two modes or options: **Changed only** or **Changed if Exist, Add if not**) or Delete.
	Message	Alert message
	Severity	Choose severity type. The Alert background displayed with the color according to the severity. Warning – Yellow Error – Orange Severe - Red
	Status	Set the alert new status. If the operation is Assigned, then specify also the user name at the right field.
	Assign User	Event24x7 user name to assign.
Details	Alert is Event24x7's component which signals to the operator that a problem exists. The Alert remains active until the problem has been resolved. **Note**: An Alert command can also be added in the Monitoring Definition Parameter's State! Tab with the same effect. The Alert is handled from the Alert Screen.	

4.1.4.11 Log

4.1.4.11.1 Append Line

Purpose	Create and handle a user log file for debug or control purposes.	
Fields	**File Name**	Name of the log file.
	Line	Line to be added. It can contain User or System variables.
Details	Event24x7 will append a line to the specified file. If the file doesn't exist Event24x7 will create it.	

4.1.4.11.2 Append Node Results

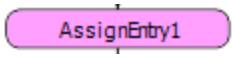
Purpose	Append node results to a user log file.	
Fields	**File Name**	Name of the log file.
	Node Name	Select a Node name from the list.
Details	Event24x7 will append the results of a node to the specified file. If the file doesn't exist Event24x7 will create it.	

4.1.4.11.3 Convert Query to HTML

Purpose	Convert node results to HTML	
Fields	**File Name**	Name of the output file.
	Node Name	Select a Node name from the list.
Details	Event24x7 will convert the results of a node to HTML and write it to the specified file. If the file doesn't exist Event24x7 will create it.	

4.1.4.12 Assign

4.1.4.12.1 Assign Entry



Purpose		
Fields	**File Name**	
	Node Name	
	Index Name	
	Scope	Select scope: **Local or Server**
	Create Columns	
	Delimiters	
Details		

4.1.4.12.2 Set

Purpose — Set value to an Event24x7 User Field.

Fields

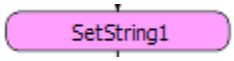
Field Name — Field name. Do not prefix the name with $$.

Value — Field value.

Scope — Field scope.
Local or Server

Evaluate? — Indicates if the value is a number

4.1.4.12.3 Set String



Purpose — Set value to an Event24x7 User String Field.

Fields

Field Name — Field name. Do not prefix the name with $$.

Value — Field value.

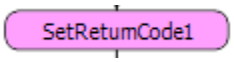
Scope — Field scope.
Local or Server

Evaluate? — Indicates if the value is a number

Type — Available options:
Substr
Left
Right
Before string
After string
Before delimiters
After delimiters

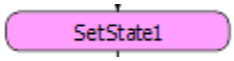
	From	Character location to start from (starts from 0)
	Length	Substring length

4.1.4.12.4 Set Return Code



Purpose	Set value to Return Code.	
Fields	**Value**	Return Code value.
	Evaluate?	Indicates if the value is a number

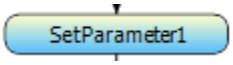
4.1.4.12.5 Set State



Purpose	Set current Workflow State	
Fields	**State**	Select workflow state: **OK** **Warning** **Error** **Severe**

4.1.4.13 Event24x7

4.1.4.13.1 Set Parameter



Purpose	Send Value directly to Parameter. It is used with a Collector that is defined as “Disable When?” (This disables the parameter from being performed every cyclic interval but only when the monitor containing this action is triggered). It means that the Collector doesn’t collect data. The parameter retrieves data from an external source: this monitor or another parameter. This statement sends a direct value to the Parameter. The Parameter isn’t initiated by the Collector but only upon the arrival of this command.	
Fields	**Session**	The Parameter’s Session name.
	Parameter	Name of the Parameter
	Value	The Parameter’s Value
	Name	The Name field of the value.
	State	Set the Parameter’s state. It can be set it in advance to OK, Warning, Error or Severe. It can also be set to “Use Parameter State? Tab” and then the parameter itself will set the state according to the State? Evaluation.
	User Parameters	Can pass user arguments as input to the parameter. It can be used at the Parameter’s side as $$#WORD1, $$#WORD2, etc.

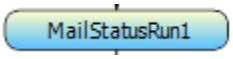
4.1.4.13.2 Session

Purpose: Handle a Session

Fields

Session	Session Name
Type	Action type: **Restart** **Stop** **Assure Active**

4.1.4.13.3 Run Mail Status



Purpose: Run Mail Status report

Fields

Script	Select report script from the MailStatus group in Templates Definition
DES Target	Select the DES target for the report
Shout (Hours)	Indicates the maximum number of hours passed since a parameter was last updated. More than this will indicate a problem and will be shown in the report.
Filter	Filter according to desired severity: All Warning Only Warning and above Error Only Error and above Severe Only Severe and above Not Run

Mail To	Mail address
Mail List?	Indicates a mailing list
Mail Server	Mail server

4.1.4.13.4 Run Printer Status

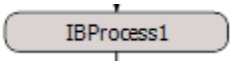
Purpose	Run Printer Status report	
Fields	**Script**	Select report script from the PrinterStatus group in Templates Definition
	DES Target	Select the DES target for the report
	Attached result CSV	Indicates if to attach the result in a CSV file to the mail
	Mail To	Mail address
	Mail List?	Indicates a mailing list
	Mail Server	Mail server

4.1.4.14 Event24x7 IB (Agent)

4.1.4.14.1 IB Service

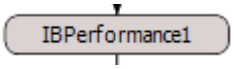
Purpose	Handle Service activity.	
Fields	**Session Name**	Session name.
	Service	Service name. Opening the combo box will bring the services currently running. Choose one of them.
	Type	Chose type from list: **Start** **Stop** **Status** **Restart**
	Retry	Number of reties
Results	Set SUCCESS	

4.1.4.14.2 IB Process



Purpose	Handle Process Activity.		
Fields	**Session Name**	Session name.	
	Name	Process name. Expanding the combo box will bring the processes currently running on the desired RES. Choose one of them.	
	Type	Type of activity: **Status** **Terminate** **Start**	
	Retry	Number of retries.	
Results	Set SUCCESS		

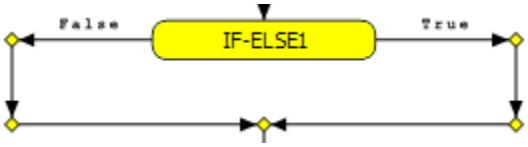
4.1.4.14.3 IB Performance Monitor



Purpose	Retrieve a Windows Performance Monitor counter value	
Fields	**Session Name**	Session name
	Object	Object name
	Counter	Counter name
	Instance	Instance name
	Server	Server name
	Cycles	Number of cycles
	Wait (mSec)	Default is 300 mSec
	Format	Long Double Large

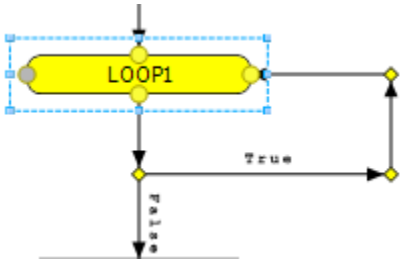
4.1.4.15 Flow

4.1.4.15.1 IF Statement



Purpose	IF Statement.	
Fields	**Condition**	Specify expression. If the expression is TRUE, the workflow will continue to the statements on the TRUE side. If the expression is FALSE, the workflow will continue to the statements on the FALSE side..

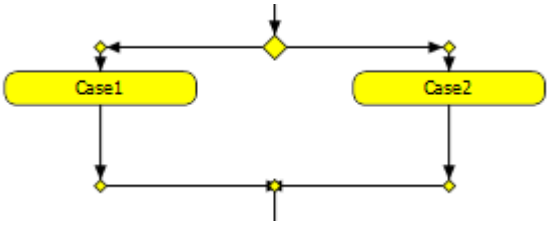
4.1.4.15.2 While Statement



Purpose	WHILE .Statement	
Fields	**condition**	Specify expression. If the expression is TRUE, the statements in the WHILE will continue to execute.
	Checking the condition	Select when to check the condition: **At the beginning of loop** **At the bottom of loop**

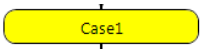
Loop count limit	Maximum number of loops
Max Iteration	???

4.1.4.15.3 Select Statement



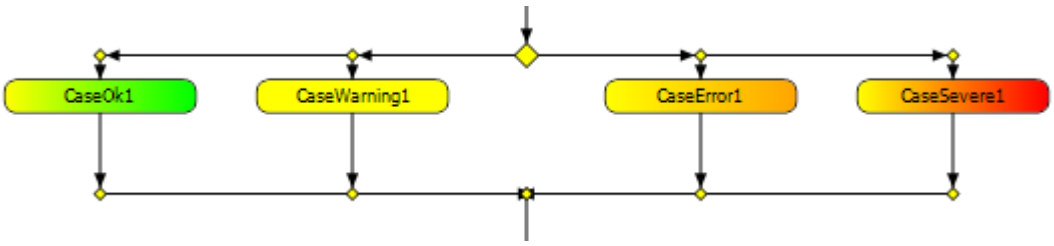
Purpose	**Select** Statement	
Fields	**Condition**	Specify expression. If the expression is TRUE, the statements in the CASE group are executed. If the expression is FALSE, the next CASE statement is examined. More CASE statement can be added.

4.1.4.15.4 Case Statement



Purpose	Add CASE clause to the **SELECT** clause	
Fields	**Condition**	Specify expression. If the expression is TRUE, the statements in the CASE group are executed. If the expression is FALSE, the next CASE statement is examined.

4.1.4.15.5 Action State



Purpose	Add a selection according to current Workflow State	
Fields	**Condition**	The condition is TRUE according to the workflow's state. (OK, Warning, Error, Severe).
	Force Action	Option to force action even if workflow's state hasn't changed
	Optional Condition	

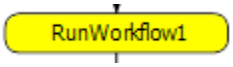
4.1.4.15.6 Exit Workflow

Purpose	Stop executing current workflow
Fields	None.

4.1.4.15.7 Exit While

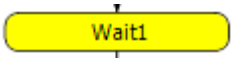
Purpose	Stop executing current while loop
Fields	None.

4.1.4.15.8 Run Workflow



Purpose	Activate another workflow	
Fields	Name	Name of workflow to activate
	Wait for ending?	Option to wait until activated workflow was ended
	Wait Timeout (Minutes)	Number of minutes for wait timeout

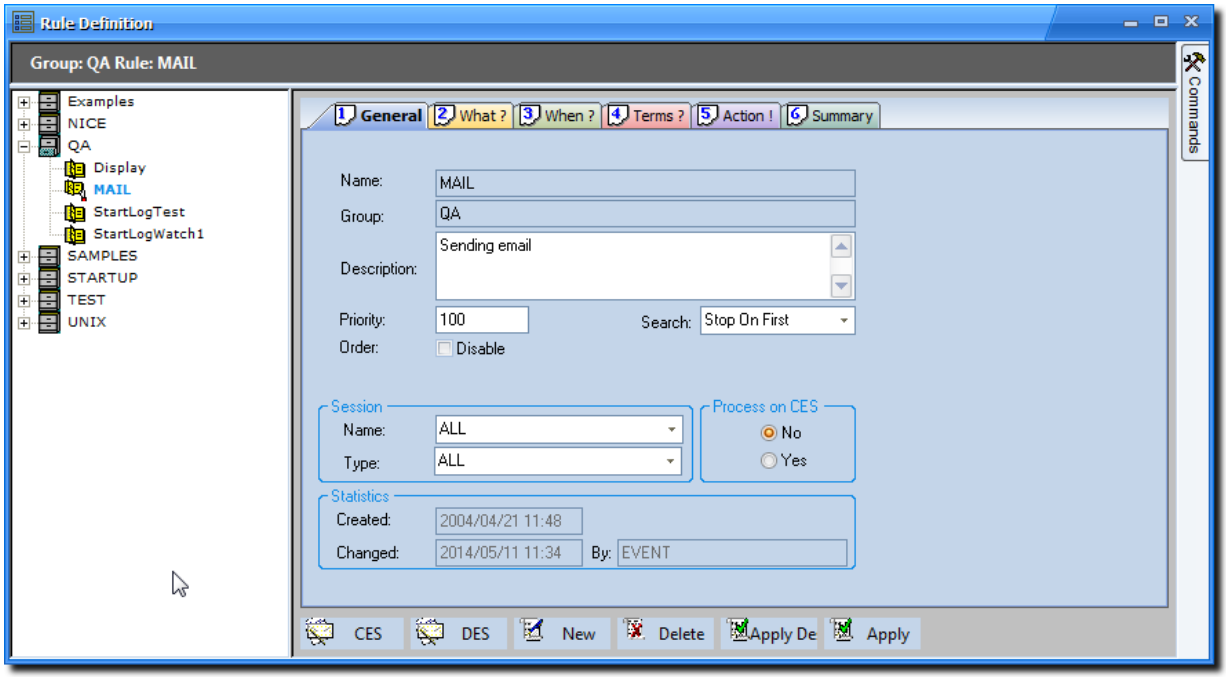
4.1.4.15.9 Wait



Purpose	Delay workflow execution	
Fields	Type	Select delay condition: **Minutes** **Condition** **Human Intervention**
	Wait	Delay interval (in minutes)

4.2 Rules Definition

Event24x7 automatically monitors and manages the entire data center to ensure system availability. The Rule System is an important component of this process. Rules define how an incoming message from one of the sessions can indicate a problem or a specific event that we want to handle. When this situation occurs, the rule is triggered. It means that the Action! part of the rule is executed and automatically attempts to handle the event, as described in the Action! Parameters for Rules section of this manual.

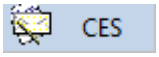
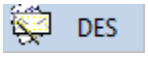
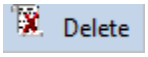
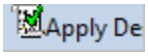
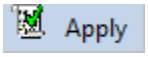


The Rule screen has two parts:

- **Rules List**
  The Rules List is located at the left pane of the screen and displayed in a tree structure. It contains the list of all the defined rules organized by groups. A group is a logical unit sharing some common content for the rules within this unit.

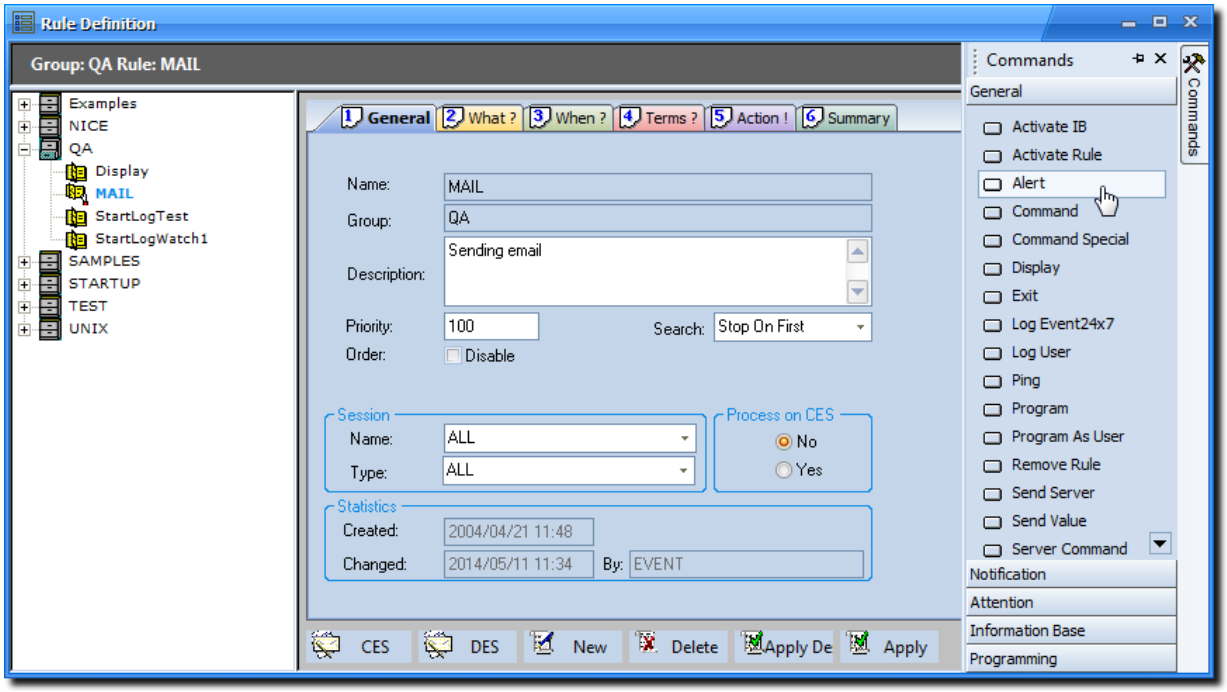
- **Definitions tabs**
  The rule definition tabs are at the right side of the screen.
  This section remains blank if you select a group from the Rules List, but shows details for a Rule.

Rule screen operation buttons

CES		Activate the selected rule on the CES Server. Rules that have been defined are not part of the rule system until they are Activated. The activate process reads the rule from the file into the memory of the Rule System.
DES		Activate the selected rule on DES's servers. If the defined rule has a specific session name then it automatically sends it to the relevant DES. If the session name is defined as ALL a Popup dialog will show a list of DESs to chose from. You can select multiple DES servers as the target.
New		Add a new Rule. Opens the definition tabs for entering a new rule.
Delete		Delete the selected rule.
Apply Des		Save last changes in the file at the DES.
Apply		Save last changes in the file.

4.2.1 Using the Definition Command box

Moving the cursor over the Commands pane at the window right side will open the Command box at the right side of the Definition window.



The Command box operates only when the Action! Tab is active.

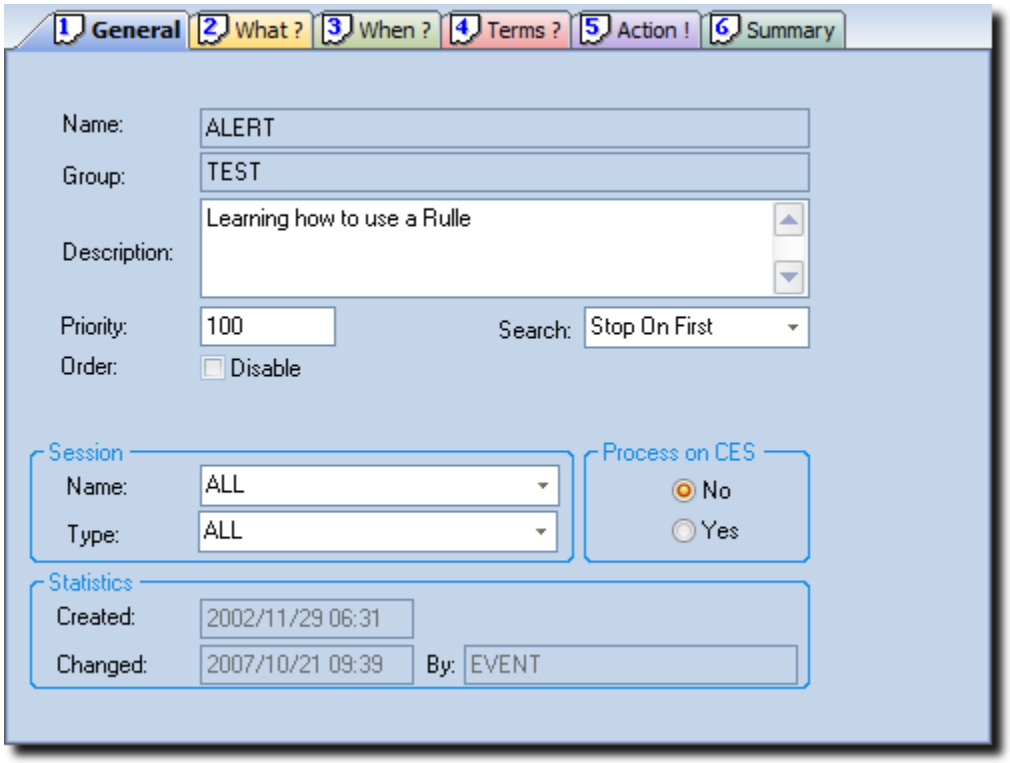
The Command box has the same effect as the Pull down command menu of the Action! Tab.

4.2.2 Reserved Group names

The Group name is used to arrange the Rule list with some logical groups.
There are several names that have special meanings and effects.

STARTUP	All the rules with STARTUP as their group name will be automatically activated when CES is started.
SESSIONACTIVE	When a session becomes active and the suitable message is displayed on the Focal Point "Internal Session status is Active", the Rule system searches for a Rule with a Rule Name equal to the Session Name that has just become Active, and Group Name of SESSIONACTIVE. If such a rule exists, it is automatically activated. This mechanism is helpful when there is a need to start activities when a session becomes Active. Using the STARTUP group is not valid for this issue since the session might not be Active when CES is started. For example, sending IBs to Agent session can be done only when the session is active.
SESSIONACTIVE_<session name>	Similar to **SESSIONACTIVE** group. Session name appears in the group. It allows triggering several rules when the session becomes active.
NewDay	Every day at 12:00 am a New Day process is performed. During this process, all the Event24x7's Log files are closed and a new one is opened. Immediately following this process, rules with this group will be triggered. It is useful for daily activities since it is triggered every starting day.
NEWDAY_STARTUP	Combination of the groups: **STARTUP** and **NewDay.**

4.2.3 General Tab



Name — Unique identifier of a rule

Group — Group name of the rule

Description — User's description of the rule.
This specifies the rule target and any other information relating to the rule. Used for documentation

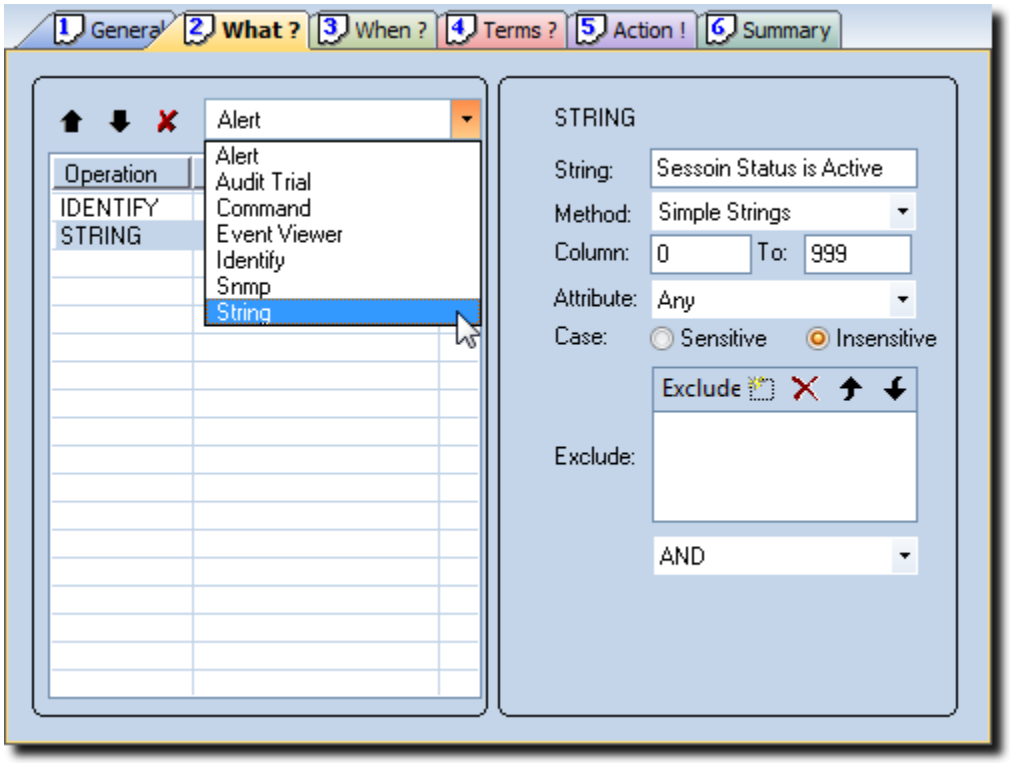
Session Type — The session's type that the rule applies to.
Available options:

- ALL meaning any session type.
- A specific type from the session type list.

Process on CES	Relevant to rules running on the Des. Events coming to DES by default are not sent to CES for rule processing for better performance. With this option you can force the DES to forward messages that are triggered by this rule to the CES server for further processing
Priority	Rule priority from 0-lowest to 100-highest. When several rules are triggered by an incoming message, they are executed according to their priorities, from the highest to the lowest.
Don't order this element	Select this option if you do not want this rule to be triggered. By default, this checkbox is not set.
Search	How to continue searching for other rules to be triggered after the first one is triggered. Available options: **Stop On First** – When the first rule is triggered, stop the search. Do not search for other rules. **Stop On Priority** – Stop the search after checking for rules with the same priority as the triggered one. **Continue** – Continue searching for other rules.
Created	Creation date of the rule.
Changed	Date of last change

4.2.4 What? Tab

The What? tab is used to define operations that trigger a rule.



"What?" consists of one or more operations with AND/OR/NOT relationship. A Rule is triggered if the operations criteria of the "What?" are met.

Available operations:

Alert	Alert processing Automation..
Command	Check command entered from the Focal Point screen.
Event	Perform action at a predefined time and date at a specific interval, to activate the rule on a cyclic basis.
Event Viewer	Check for specific Event Viewer records.
Identify	Check for specific message ID in the incoming message.
Parameter	Provide Parameter correlation.
SNMP	Check for incoming SNMP traps.
String	Check for specific strings in the incoming message.

An Event cannot be combined with other operations. The String and Identifier depend on the nature of the incoming event message.

To add an operation, choose from pull down box: Event, Command, Identify or String. The parameter window on the right hand side will change according to your selection.

Press the button to delete the selected operation.
Press the buttons to move the selected operation up or down.

4.2.4.1 Alert Parameter

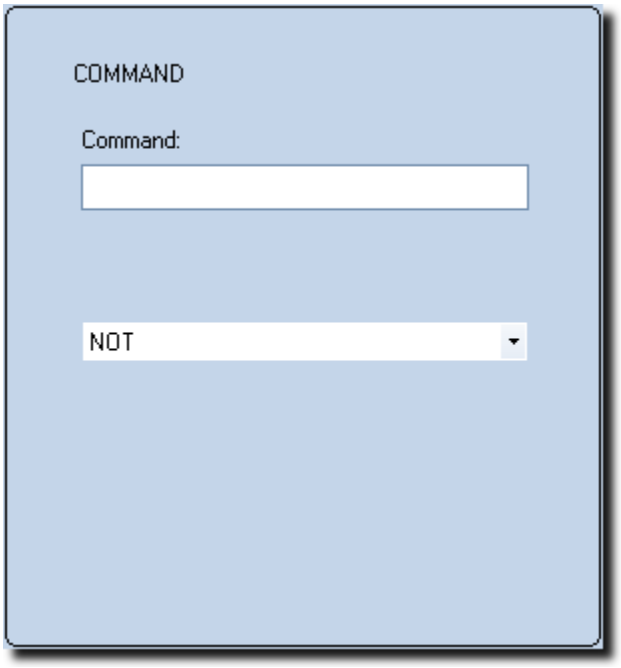
Purpose — Perform action based upon a newly created alert operation.

Fields

Action	Alert Action operations: Add, Change, Change or Add, Delete.
Session	Session Name
Source	Identify the alert's Source: Rule or Performance activities.
Message	The Alert message text.
Severity	Alert severity.
Status	Alert status.

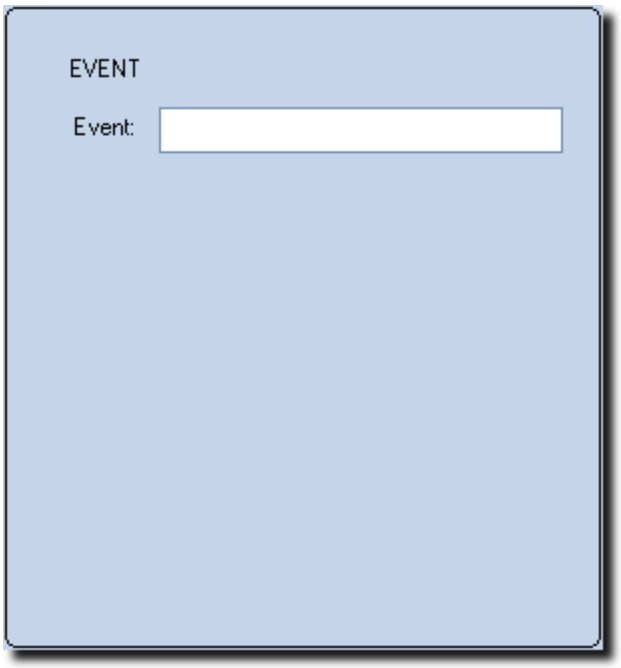
Prev Status	Previous status. Useful for performing an action when the alert was created. For action "Change or Add" if previous status was not open it means that a new alert was created.

4.2.4.2 Command Parameter



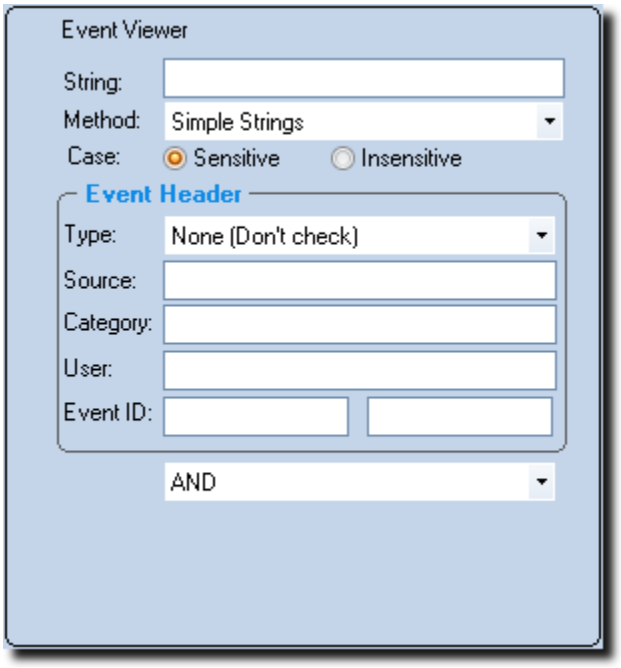
Purpose	Perform an action based upon a command entered from the Focal Point command line.	
Fields	**Command**	Command to execute. Mandatory field.
Details	**What? Command** enables a rule to be triggered by a command entered from the Event24x7 Focal Point screen. The first word typed in the command line is the command to be checked. The other words are treated as parameters. You can reference them with the system variables. $$#WORDn - Take the nth word from beginning of the command line. $$#FWORDn - Take from the nth word to the end of the command.	

4.2.4.3 Event parameter



Purpose	Perform an action based upon a scheduling time and terms criteria.	
Fields	**Event**	Event Name. A mandatory field.
Details	The **What?** Event enables a rule to be triggered based on its definition alone. Usually rules are triggered based on incoming messages from the monitored session. The Event rule does not check the incoming messages, but is triggered based upon the Scheduling parameters from the **When** tab and the terms from the **Terms** Tab. The Event rule uses cyclic checks. The rule is triggered automatically at a specific day and time or at an interval set using the **Interval** parameter from the **When?** tab. Since the Event rule is triggered regardless of incoming messages, it doesn't depend on What? parameters. When defining Event statement, no other What? parameter is required.	

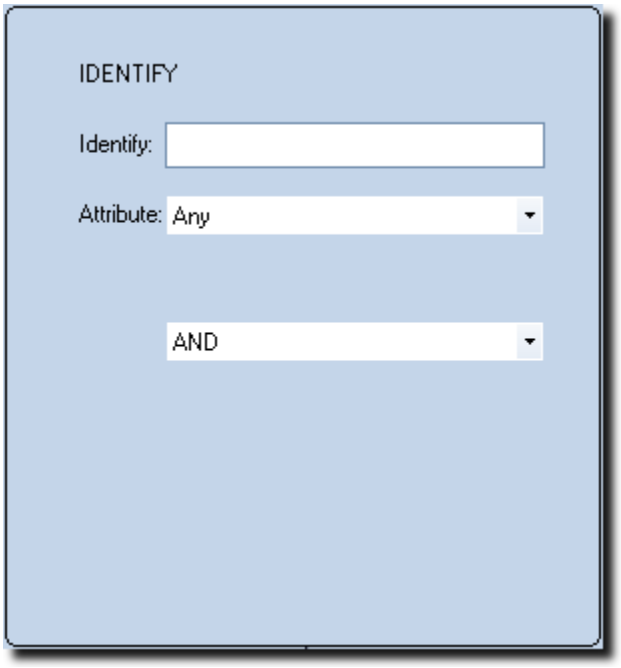
4.2.4.4 Event Viewer



Purpose	Perform an action based upon a specific string that appears in the incoming Event Viewer message or according to the header of the message.	
Fields	**String**	String to search
	Method	Method to use for finding the string: • Simple string search • Using wildcard search with '?' and '*' in pattern. '*' means any characters and '?' means a single character.
	Case	Whether the search is sensitive to upper-case or lower-case letters.
	Type	Search only logs of this type for the above string. Possible types are: **None** (Don't Check), **Error**, **Warning**, **Information**, **Failure** and **Success**.
	Source	Search for specific Source from the header
	Category	Search for specific Category
	User	Search for specific User name
	Event ID	Search for a specific Event ID.

You can specify up to two Event IDs in a single request.

4.2.4.5 Identify Parameter



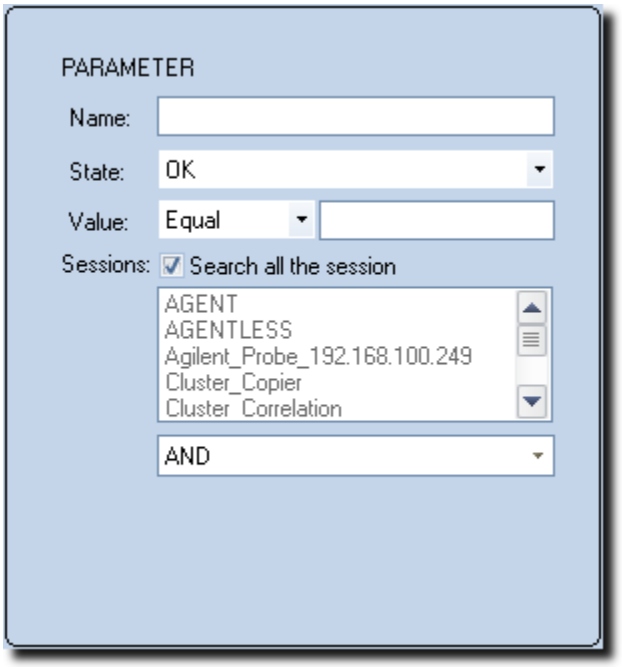
Purpose	Perform action "based upon the Message ID part of the incoming message.	
Fields	**Identify**	Message ID of the message. Field is in Alphanumeric format. Wildcard (* and ?) can be used.
	Attribute	Attribute of the message. Available options: **Any** **Normal** **High Intensity**
Details	**What? Identify** enables Rule to be triggered by specific messages based on their Message ID.	

Message ID is valid only when the target session has a Message ID. For example: MVS, AS400.

Example

Identify IEF*
Every message id that has an IEF prefix.

4.2.4.6 Parameter



.

Purpose

Perform action based upon a newly parameter's changed state.

Fields

Name Parameter's Name

State Parameter's State. Available options: **OK**, **Warning**, **Error**, **Severe** and **NOT OK**. **NOT OK** stands for a state other than OK.

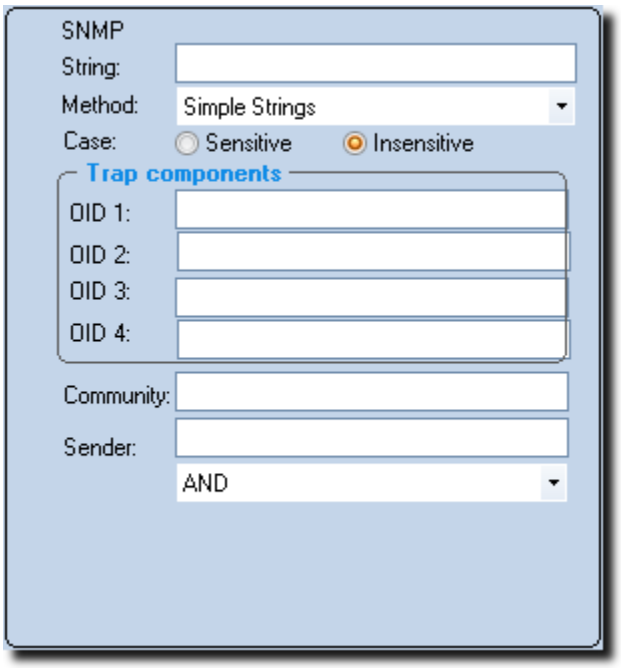
Value Compare against the Parameter's recent value that caused the state to change.

Sessions Limit the parameter's search for specific sessions.

When the "Search all the session" field is checked, the search for the parameter will be done against all the defined sessions.

Details	Every parameter that changed its state is sent to the rule engine for evaluation. Since the Parameter rule is triggered regardless of incoming messages, it doesn't depend on other What? Statements. When defining a Parameter statement, no other type of What? statement is required.

4.2.4.7 SNMP Parameter

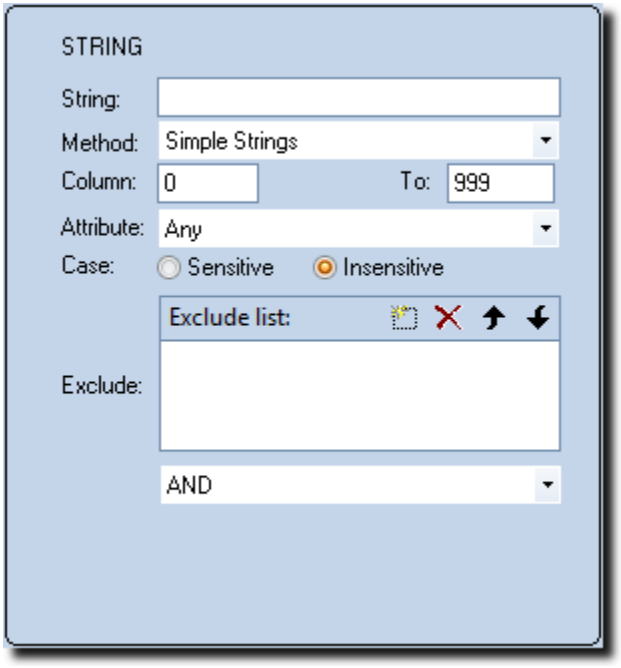


Purpose	Perform action based upon a specific SNMP Trap that appears in the incoming message.	
Fields	**String**	String to search
	Method	Method to use for finding the string: • Simple string search • Using wildcard search with '?' and '*' in pattern. '*' means any characters and '?' means a single character.
	Case	Whether the search is sensitive to upper and lower case.
	OID 1-4	For MIB Snmp checks, the content of the first OIDs are in the mib.
	Community	Community of the SNMP trap.
	Sender	Sender's IP address.

Details

What? SNMP enables a Rule to be triggered when a specific SNMP Trap is intercepted by the SNMP Event24x7's session.

4.2.4.8 String Parameter



Purpose

Perform an action based upon a specific string that appears in the incoming message and/or other strings that do not appear (i.e. look for incoming messages that contain the string specified here but do not contain the strings specified in the exclude list if such strings exist).

Fields

String String to search

Method Method to use for finding the string:

- Simple string search
- Using wildcard search with '?' and '*' in the pattern. '*' means any characters and '?' means a single character.

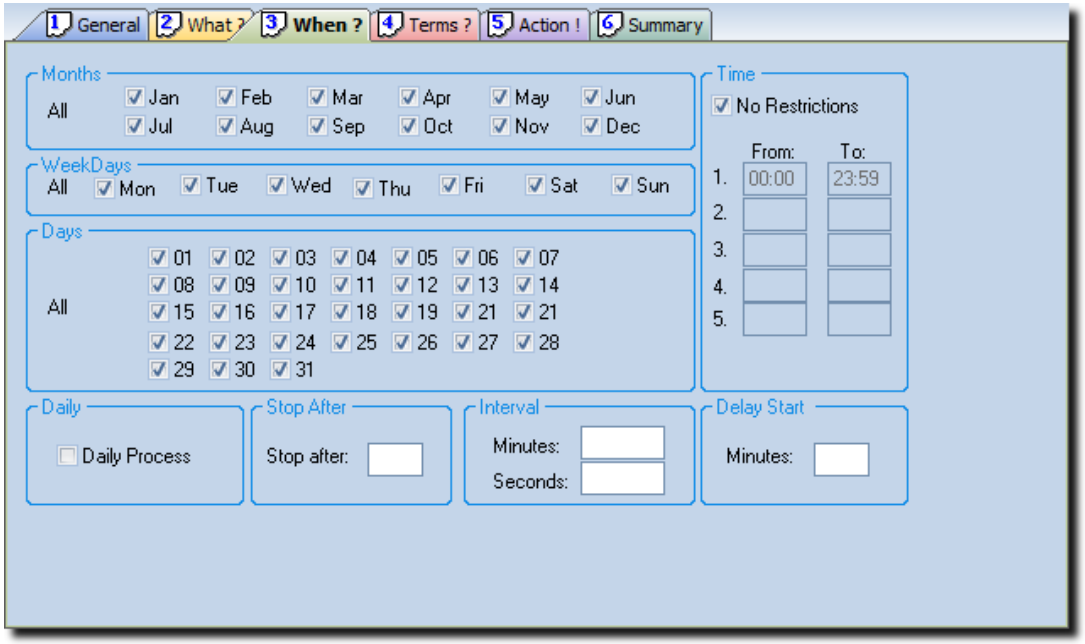
Column Starting column. The searched string must start from this position.

To Ending column.

	Attribute	Attribute of the message. Available options: **Any** **Normal** **High Intensity**
	Case	Whether the search is sensitive to upper and lower case.
	Exclude List	A list of strings that must be ignored, i.e. if an incoming message containing the string above is found – it should be also checked for the strings in this list. If at least one of them is also found in this message, then the message should be ignored.
Details		**What? String** enables a Rule to be triggered when a specific string appears in the incoming message and other strings (if they exist in the Exclude List) do not appear. Please note that using the Wildcard search overrides the use of Columns and Case sensitive.

4.2.5 When? Tab

The When? tab defines the scheduling parameters for active rules. Still in order for a rule to become effective it needs to be activated first.

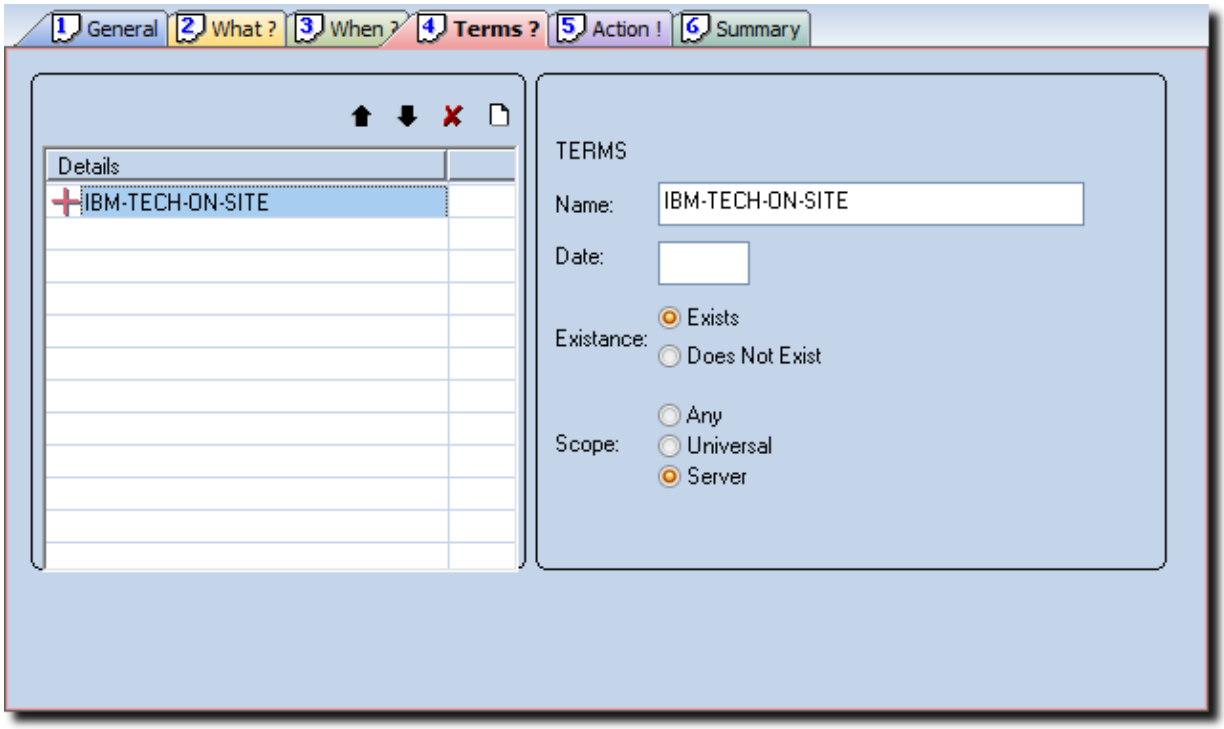


Select any of the following: months, week days, and days of month, interval and time frame.

Months	Specify months the rule will be active
Weekdays	Specify weekdays the rule will be active
Days	Specify days the rule will be active
From Time	Specify the beginning time from which the rule will be active.
To Time	Specify the end of the time frame during which the rule is active.
Daily Process	Specify whether the rule will be scheduled on a daily basis. If it is not checked, the rule will not be scheduled automatically on the next day.
Stop After	Stop rule after a number of executions.
Interval	For cyclic rule, specify the interval upon which the rule will be scheduled.

4.2.6 Terms Tab

The Terms tab defines the logical terms that trigger a rule.



Each term has a name and an optional date in which it is active.

A term has two states of existence:

- **Exists**
  The rule will be triggered only if the named term exists.

- **Does Not Exist**
  The rule will be triggered only if the named term does not exist.

Example: execute rule only if these two terms are met:

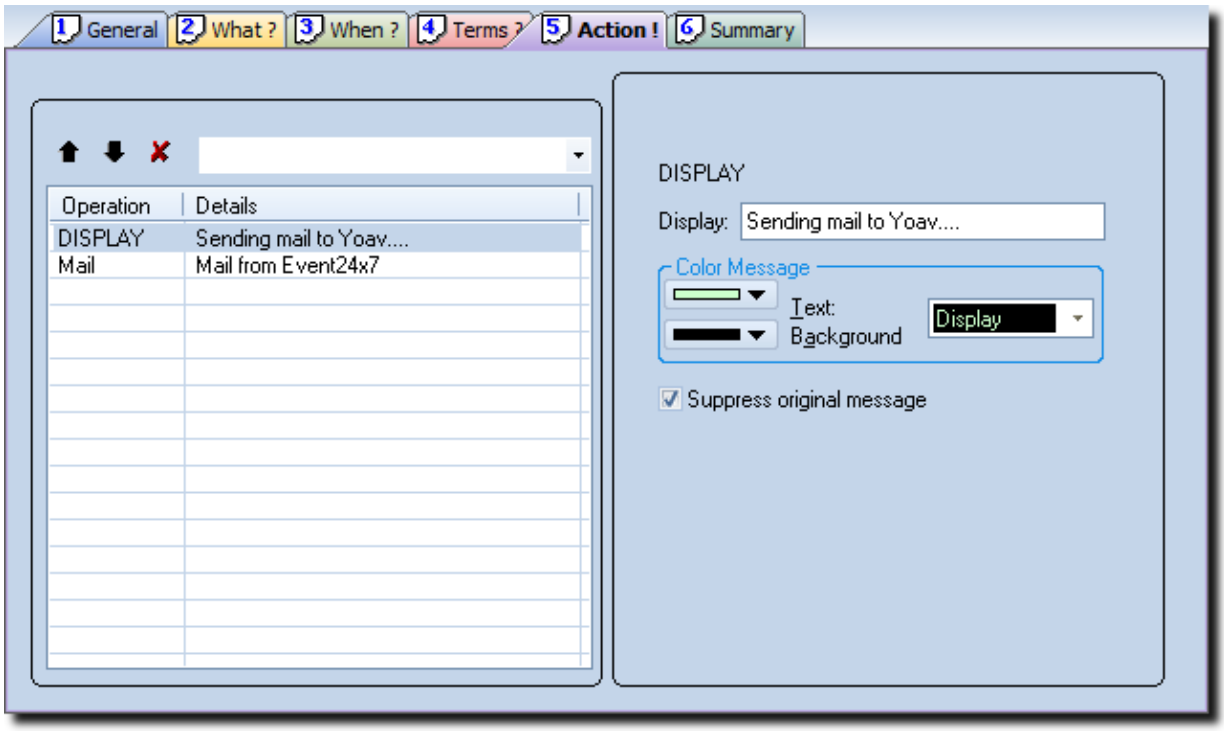
"MVS-IS-UP" exists, and "IBM TECH WORKING" does not exist.

A term has three scopes:

- **Server**
  Check on the level of the running server: DES or CES.
- **Universal**
  The term is defined at all servers DES and CES.
- **Any**
  Equivalent for Server and Universal scope.

4.2.7 Action! Tab

The Action! Tab defines the action's command that should be taken when a rule is executed.



A Pull down menu allows for a selection of activities

Activate Downtime	Activate predefined Downtime.
Activate IB	Activate Information Base at a remote session.
Activate Rule	Activate a rule or group at Event24x7's server.
Activate Workflow	Activate a Workflow.
Alert	Open new Alert at the alert windows.
Backup	Automatic backup of the User configuration files
Beep	Generate a "Beep" sound.
Case	Add a **CASE** line to the **SELECT** statement.
Check Thresholds	Check values against thresholds.
Clear Text	Clears the text in current line.
Command	Issue a command to the session.
Command DOS	Issue a DOS command.
Command PsExec	Issue a PsExec command on remote computer.
Command Special	Send special character keys to a session: Enter Tab, Reset, home, New-line.
CTM Condition	Handle CONTROL-M conditions.

CTM Jobs	Orders or forces jobs from a Scheduling table.
CTM Load set	load-balancing algorithm for CONTROL-M
CTM Resource	Performs operations on the Quantitative Resources table.
CTM Shout	Sends a message to the specified user or destination.
Display	Display a message to the focal point
Else	Add an **ELSE** line to the **IF-THEN** statement.
Else Object	Add an **ELSE** line to the **IF-OBJECT** statement.
Else Parser	Part of the **If Parser** command – the statements following the Else parser are performed when the IF parser conditions are not met.
Exit Rule	Stop the execution of the current rule.
File Copy to Server	Send file to EventStudio
HTTP	Check availability of URL
IB Application Log Record	Record a specific event in an Event24x7 log file
IB Boot	Restart options for the specified session – either Shutdown, Restart and Win32Shutdown options.
IB Performance	Refers to the Performance monitor – gives you the option to monitor specific objects that exist inside the perfMon on the related RES server.
IB Performance VB Script	Like the previous command refers to performance monitor objects but in this case with the use of a VB script.
IB Process	Check all the existing processes running on a server. Have the option to start or stop a specific process.
IB Resources	Check internal resources of an existing server: Either CPU, Memory, Handles or Thread Count.
IB Service	Check server's existing services. Have the option to start, stop, restart or just check the status of a specific service.
IF	Open **IF-THEN** statement**.**
IF Object	Open **IF-Object** statement.
IF Parser	Open **IF-THEN** compiled statement – like IF but for multiple conditions.
Log Event24x7	Write a text message to CES or DES Even24x7 log file.
Log User	Write a text message into any user file.
Mail	Send an email notification.
Mail Status Run	Send Parameters status via mail.
Notification Center	Send SMS using the Notification Center.
Notification Enable Disable	Enable or Disable the Notification.
Notification SMS Immediate	Send an immediate SMS notification.
Parse File and Set	Convert a file to Event24x7 variables.

Parse Input and Set	Convert a single message to Event24x7 variables. Optionally you can send them to Parameters.
Ping	Check address for connection.
Play File	Play file to get the operator's attention.
Popup	Display a variety of notification popup windows.
Printer Status Run	Schedule report via mail with printer counters.
Program	Execute any external program at the Server machine.
Program As User	Execute any external program under User credential
Remove Rule	Remove a rule or group from memory.
Report	Save a report for Open Problems on Event24x7.
Restart Server	Restart current Event24x7 server.
Select	Open **Select** statement.
Send Server	Send User Variable from CES to DES
Send Value	Send User Variable from CES or DES to IB (Agent of RES)
Server Command	Simulate receiving command on the Focal Point.
Server Parameter	Send Parameter to DES.
Session	Stop/Start session.
Set	Create and assign values to a User Edit variable.
Set Parameter	Set a value to a Parameter bypassing a Collector.
Set String	String manipulation.
Sleep	Sleep for a specified amount of seconds
SMS	Send SMS message via internet.
SMS Wireless	Send SMS message via cellular modem
SNMP Mib Interactive	Send or Get or Set SNMP requests for SNMP objects.
SNMP Mib Trap	Send a SNMP Mib Trap.
SNMP Send Trap	Send a simple SNMP Trap.
Table Talk	Ability to manage dynamic arrays in memory on the fly.
Tcpip	Send a TCP/IP packet to host.
Terms	Add or delete a term.
Text in Screen	Find a specific text on the console screen.
User Exit	Execute a user defined DLL or DLL process.
Voice	Start Event24x7 IVR request.
While	Open **DO-WHILE** statement.

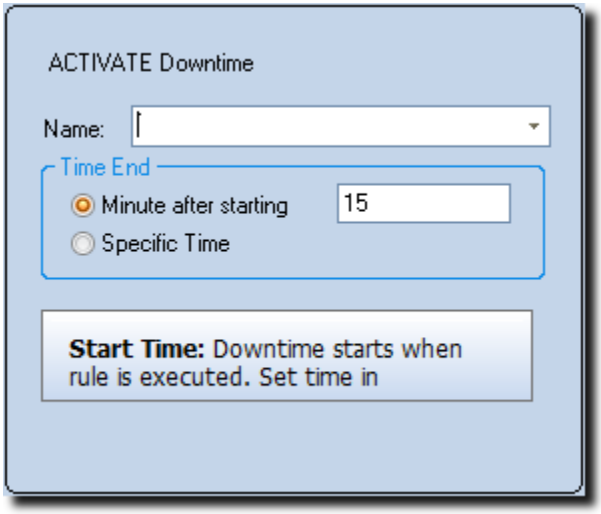
The Rule may contain any number of action commands. Execution of the commands is done sequentially from the first to the last.

Using Event24x7 Variable in Action!

When adding actions in Action! You can use Event24x7 System variables (prefix of $$#) and global User variables (prefix $$) in the parameters. See Special Variables section for more details.
When the rule executes the **Action**! Statements, it first checks whether the statement contains Event24x7 variables. If it does, it first changes each variable to the variable value and only then executes the action.

4.3 Action! Parameters for Rules

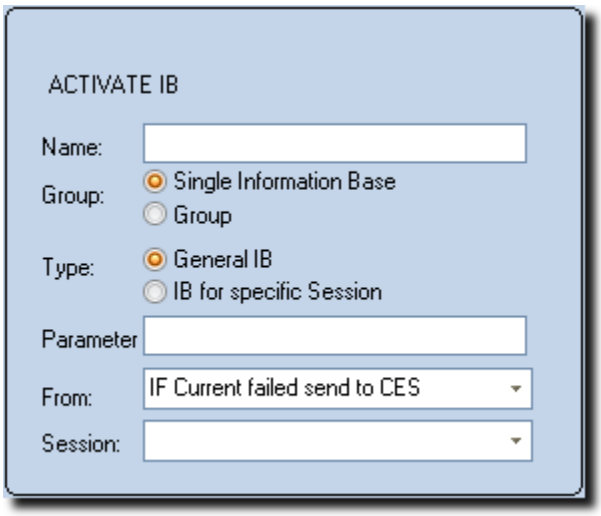
4.3.1 Activate Downtime



Purpose	Activate predefined Downtime	
Fields	**Name**	Name of a Downtime object.
	Time End	Number of minutes after starting or a specific time
Details	Downtime will start once the rule is activated, according to it's When tab. The Downtime will end according to the Time End selection in this action.	

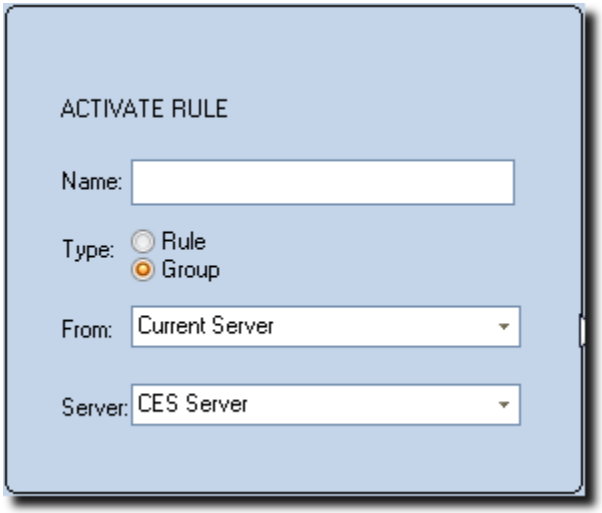
Details	Activate predefined Downtime for a period of time or until a specific time.

4.3.2 Activate IB



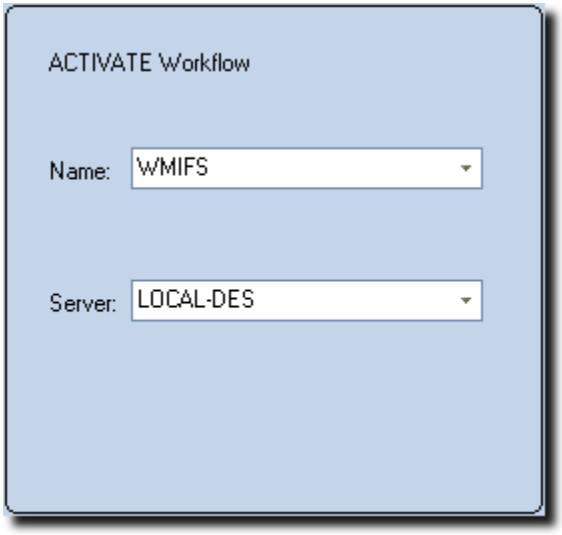
Purpose	Activate Information Base at a specific Event24x7 RES (smart agent).	
Fields	**Name**	Name of a single IB or Group of IBs to activate.
	Group	Choose IB or group of IBs
	Type	Choose target: single IB or entire Group of IBs.
	Parameter	
	From	Determine from which server to take the IB to send: Current Server, or ask CES to send .
	Session	Session to receive the Information Base. Choose a session from the list of defined session if Event24x7.
Details	Activate Information Base on a specific session. Has the same result as Activate IB from the IB definition screen and the Monitoring Definition Parameter's State! Tab.	

4.3.3 Activate Rule



Purpose	Activate a Rule.	
Fields	**Name**	Name of single Rule or Group of Rules to activate.
	Type	Choose as a target either a single rule or an entire group of rules.
	From	Determine from which server to take the Rule: Current Server, or ask CES to send.
	Server	Server to activate the rule
Details	Activate Rule. This has the same result as Activate Rule from the IB definition screen and the Monitoring Definition Parameter's State! Tab.	

4.3.4 Activate Workflow

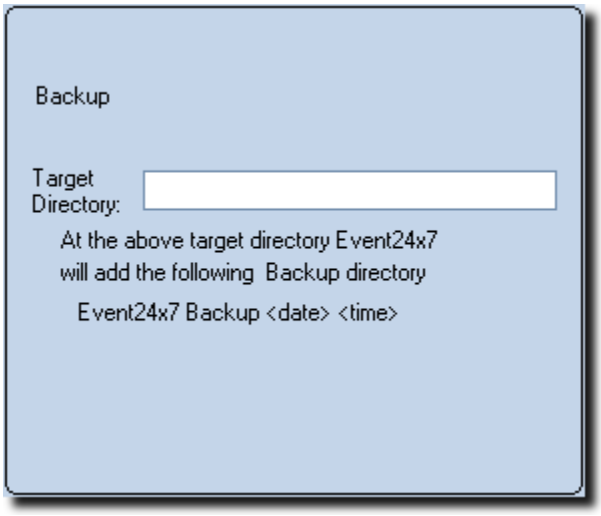


Purpose	Activate a Workflow.	
Fields	**Name**	Name of workflow to activate.
	Server	Server to activate the workflow.
Details	Activate Workflow on the selected DES.	

4.3.5 Alert

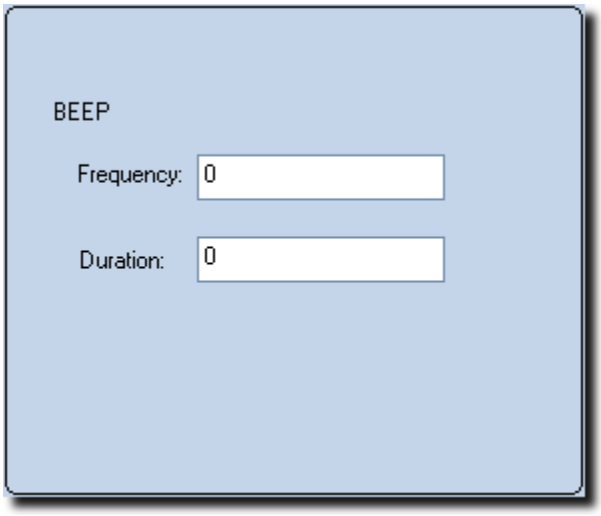
Purpose	Create a new Alert in the Event24x7 alert system.	
Fields	**Operation**	Choose the operation Add, Update(two modes or options: **Changed only** or **Changed if Exist, Add if not**) or Delete.
	Message	Alert message
	Severity	Choose severity type. The Alert background displayed with the color according to the severity. Warning – Yellow Error – Orange Severe - Red
	Status	Set the alert new status. If the operation is Assigned, then specify also the user name at the right field.
Details	Alert is Event24x7's component which signals to the operator that a problem exists. The Alert remains active until the problem has been resolved. **Note**: An Alert command can also be added in the Monitoring Definition Parameter's State! Tab with the same effect. The Alert is handled from the Alert Screen.	

4.3.6 Backup


Backup
Target Directory:
At the above target directory Event24x7 will add the following Backup directory
Event24x7 Backup <date> <time>

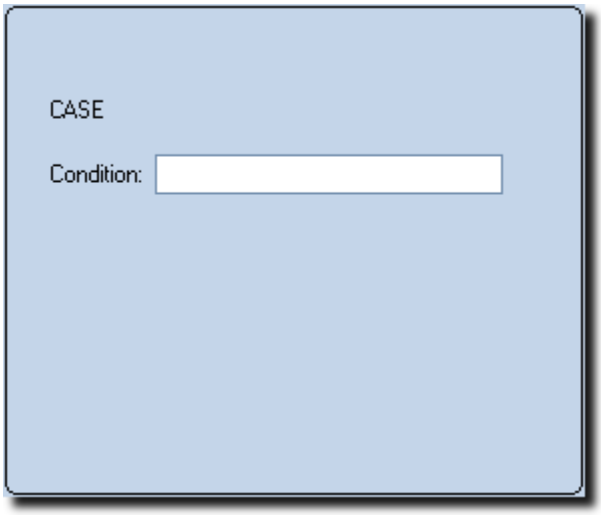
Purpose	Backup the user's configuration files.	
Fields	**Target Directory**	Place to write the backup files.
Details	It is important to take a backup occasionally of the user's configuration files. **Note**: The Backup command can also be added in the Monitoring Definition Parameter's State! Tab with the same effect.	

4.3.7 Beep



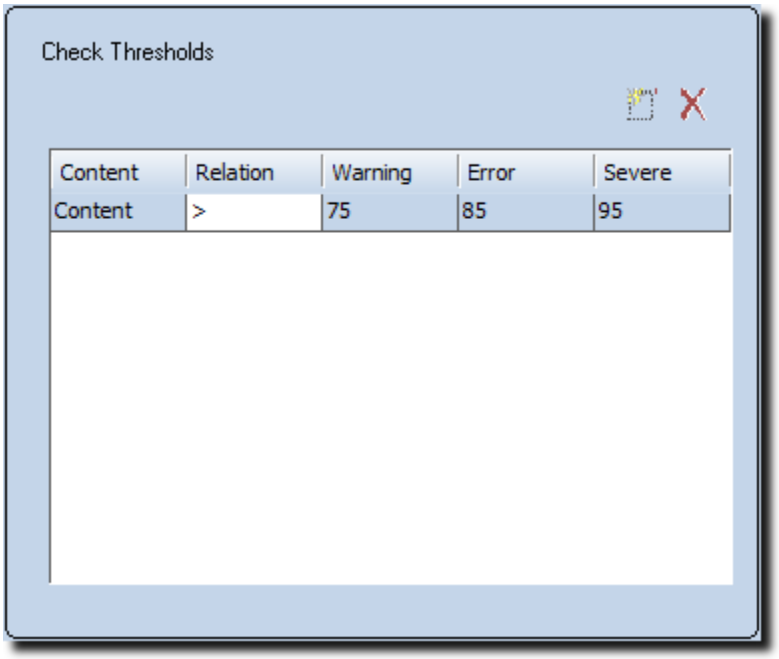
Purpose	Play a beep on the PC internal speaker.	
Fields	**Frequency**	Frequency, in hertz, of the sound. This parameter must be in the range of 37 through 32,767 (0x25 through 0x7FFF).
	Duration	Duration, in milliseconds, of the sound.
Details	The **Beep** function generates simple tones on the speaker.	
	Note: The Beep command can also be added in the Monitoring Definition Parameter's State! Tab with the same effect.	

4.3.8 CASE



Purpose	Add CASE clause to the **SELECT** clause.
Fields	expression.
Details	Two lines are added to the actions command: **CASE** expression **CASE-END** You can add action statements between the above lines, and these statements will execute only if the CASE in the first expression is valid. **Note**: The CASE command can also be added in the Monitoring Definition Parameter's State! Tab with the same effect.

4.3.9 Check Thresholds



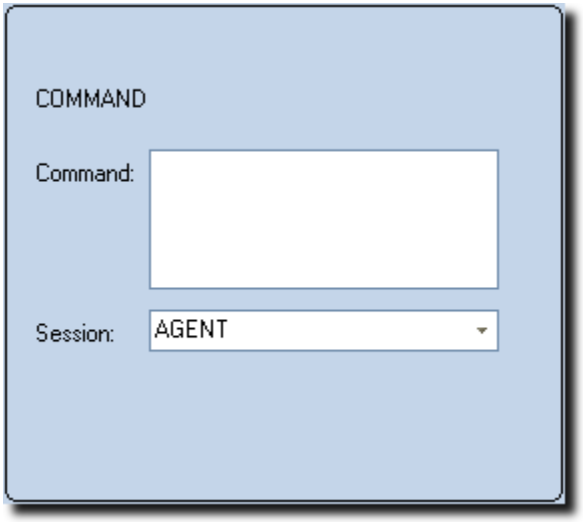
Purpose	Change the state dynamically.	
Fields	**Content**	Field name from the Create Tab.
	Relation	Relation to compare
	Duration	Duration, in milliseconds, of the sound.
Details	Take the value of Content field and compare it to the specified threshold. Set the Parameter state according to the Relation and the thresholds.	

4.3.10 Clear Text

The command has no dialog.

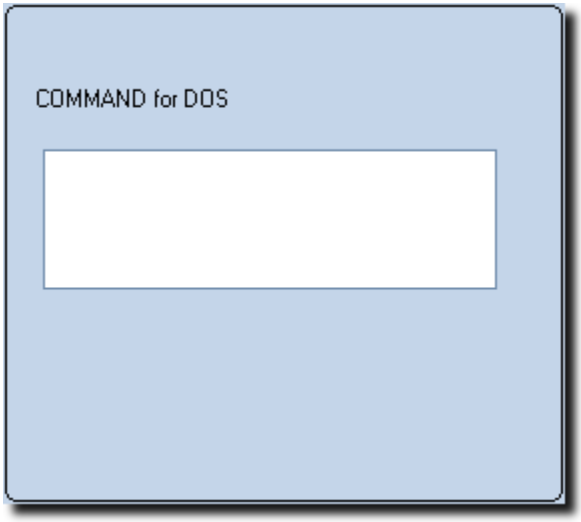
Purpose	Clear the context of session's console
Fields	None
Details	Event24x7 Script handles automatic login script and sends wireless SMS. Both scripts may use the Action! Text on the Screen to search for specific text in the session's console. It is sometimes required to clear the console in order to delete existing lines from previous requests. This is relevant only in Linux and Unix sessions when attempting automatic login. **Note**: The Clear Text command can also be added in the Monitoring Definition Parameter's State! Tab with the same effect.

4.3.11 Command



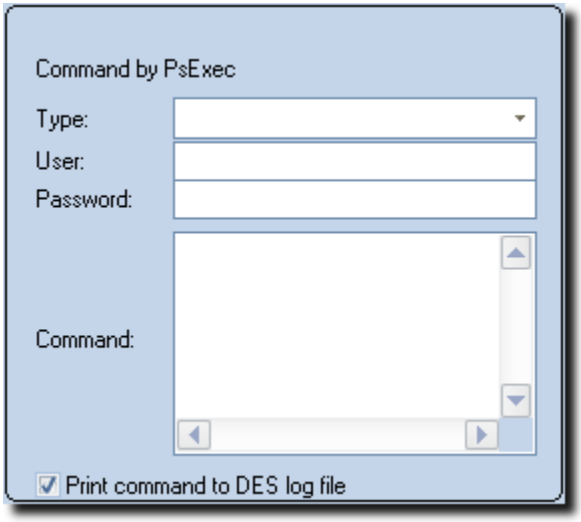
Purpose	Send a command to a monitored session.	
Fields	**Command**	The command to send.
	Session	The session to send the command to. Choose a session from the session list. The first entry on the session list is "Current Session". It sends the command to the same session that is the source of the event triggering this rule.
Details	Send command to the target session.	

4.3.12 Command DOS



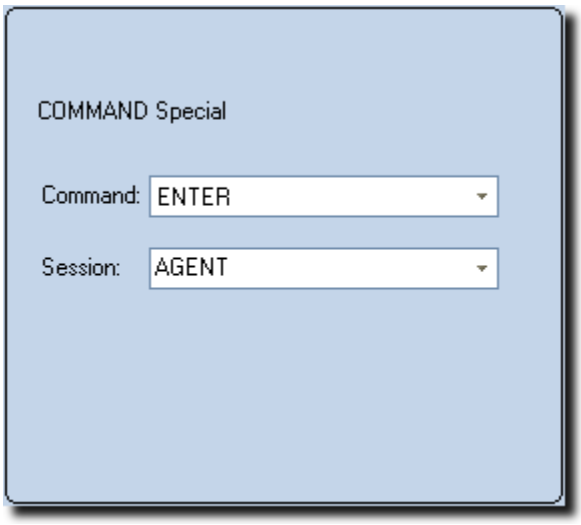
Purpose	Issue a DOS command on the monitored session.	
Fields	**Command for DOS**	The command to send.
Details	Issue a DOS command on the target session.	

4.3.13 Command PsExec



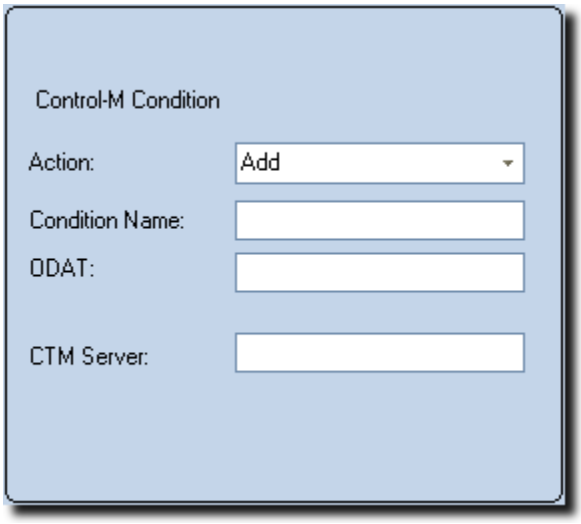
Purpose	Send a PsExec command to a monitored session.		
Fields	**Type**	Type Options are: **External with -d (default)** **External without parameters** **Internal**
	User	User name to be used for the command.
	Password	Password to be used for the command.
	Command	The command to send.
Details	Send PsExec command to the target session.		

4.3.14 Command Special



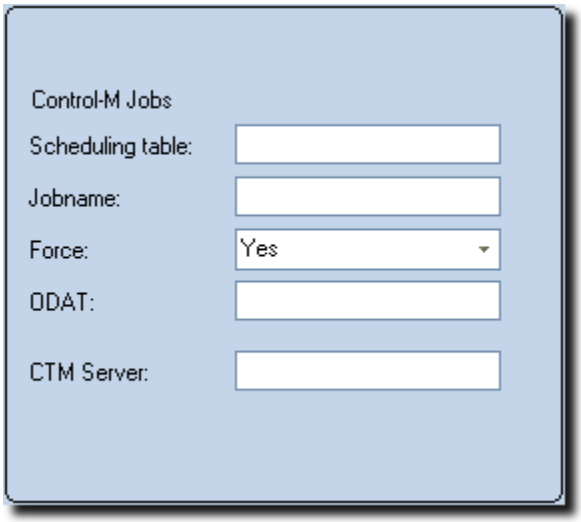
Purpose	Send a special command to a monitored session.	
Fields	**Command**	Choose a command to send from these available options: **ENTER**, **TAB**, **RESET**, **HOME**, **NEWLINE, Blank, BREAK, EOF** and a set of **Control-Key** commands**.**
	Session	The session to which the command is sent to. Choose a session from the session list.
Details	The special command can't be sent by the ACTION! COMMAND. **Note**: The Command Special command can also be added in the Monitoring Definition Parameter's State! Tab with the same effect.	

4.3.15 CTM Condition



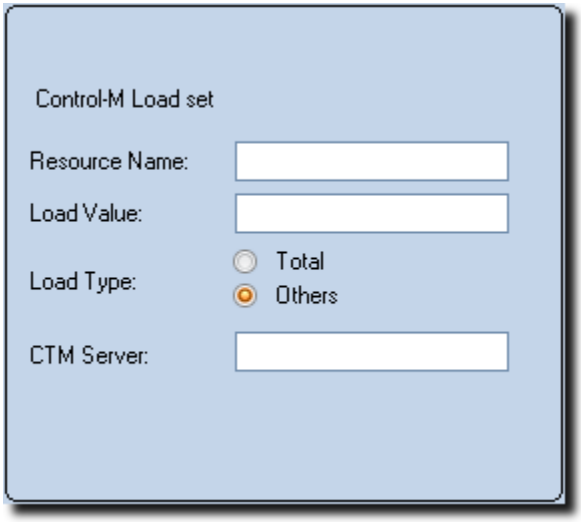
Purpose	Operations on prerequisite conditions in the CONTROL-M/Server database.	
Fields	**Action**	Add or Delete operations
	Condition Name	Condition Name
	CTM Server	Address of CONTROL-M Agent
Details	Activate **ctmcontb** utility	

4.3.16 CTM Jobs



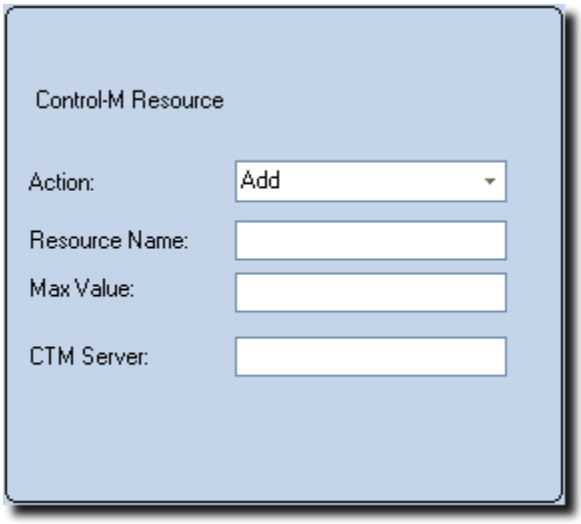
Purpose	orders or forces one or more jobs from a Scheduling table in the CONTROL-M/Server database	
Fields	**Scheduling table**	Scheduling Table name
	Jobname	Job name (or mask) of the job(s) to order or force.
	Force	Force or Order option.
	ODAT	The current working date of the computer on which CONTROL-M/Server is running.
	CTM Server	Address of CONTROL-M Agent
Details	Activate **ctmorder** utility	

4.3.17 CTM Loads set



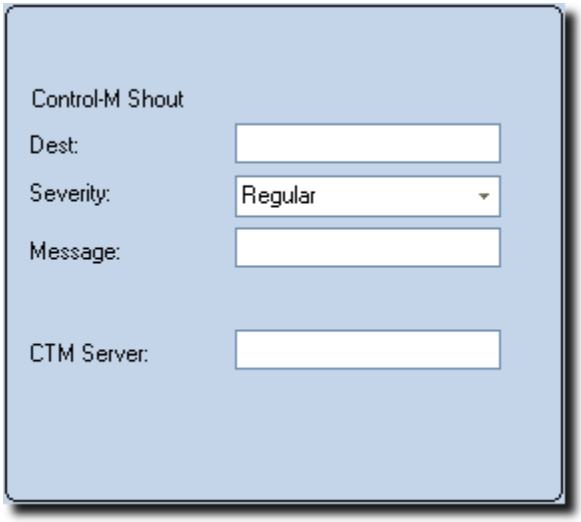
Purpose	The ctmloadset utility records current resource usage on an agent computer in the Quantitative Resources table of CONTROL-M	
Fields	**Resource Name**	Name of the Quantitative resource to update
	Load Value	Number of units of the resource currently used
	Load Type	Total or Other
	CTM Server	Address of CONTROL-M Agent
Details	Activate CONTROL-M The **ctmloadset** utility and it is part of The CONTROL-M load-balancing algorithm	

4.3.18 CTM Resource



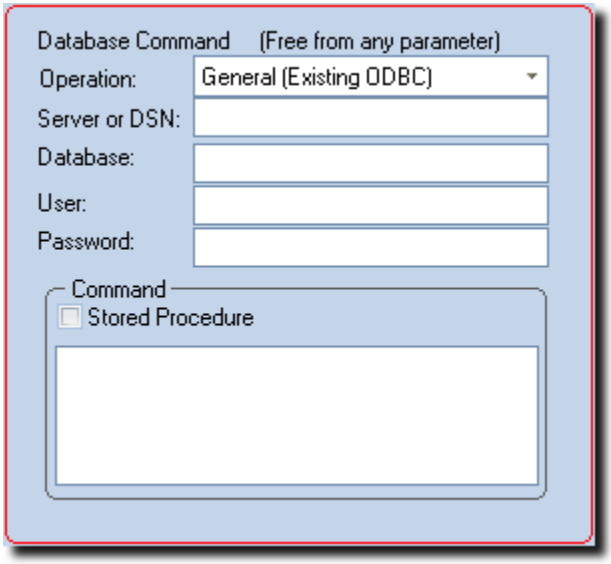
Purpose	Performs operations on the Quantitative Resources table.	
Fields	**Action**	Add, Delete or Update.
	Resource Name	CONTROL-M Resource name
	Max Value	Maximum availability for the specified resource
	CTM Server	Address of CONTROL-M Agent
Details	Activate the **ecaqrtab** utility.	

4.3.19 CTM Shout



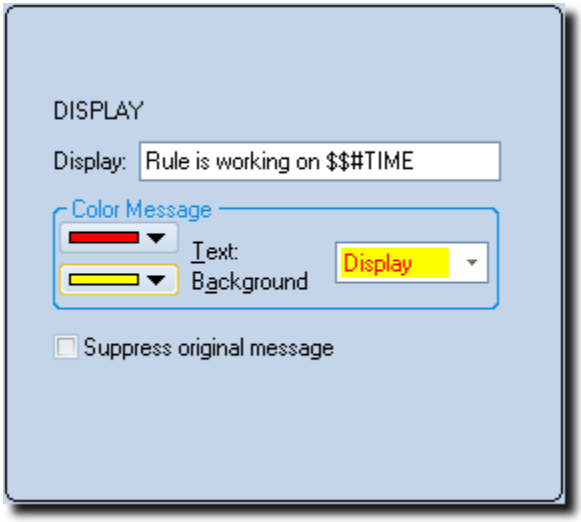
Purpose	Sends a message to the specified user or destination using the specified severity level.	
Fields	**Dest**	Destination Name
	Severity	Severity level
	Message	Message to send
	CTM Server	Address of CONTROL-M Agent
Details	Activate the **ctmshout** utility	

4.3.20 Database Command Free



Purpose	Execute database command on the monitored session, for any database and any database user.	
Fields	**Operation**	Select Database: **SQL Server** **Oracle OLE DB** **Oracle ODBC**
	Server or DSN	Server's IP or name.
	Database	Database name.
	User	Database user name.
	Password	Database password.
	Command	Command to perform on database.
	Stored Procedure	Indicate whether the Command is actually Stored Procedure
Details	The Database command is responsible for database manipulation activities (Deleting database entries, adding new ones and/or using sql to retrieve selected entries).	

4.3.21 Display



Purpose	Display a message at the Focal Point.	
Fields	**Display**	Message to be displayed.
	Color Message	Set the color of the message text and background color.
	Suppress message	When checked the original event message would not be displayed on the Focal Point window. By default, every incoming event is also displayed on the Focal Point window.
Details	This establishes the capability for the rule to display messages on the Focal Point screen during the rule execution. The Source column of the display message will be shown in this format: **Rule:** followed by the Rule name.	
Example	**DISPLAY** Current time is $$#TIME Display current time on the Focal Point using Event24x7 system variable $$#TIME. **Note**: The **DISPLAY** command can also be added in the Monitoring Definition Parameter's State! Tab with the same effect.	

4.3.22 ELSE

Purpose — Add an **ELSE** clause to the **IF-THEN** clause.

Fields — None.

Details — Two lines are added to the actions command:

ELSE
ELSE-END

You can add action statements between the above lines, and these statements will execute only when the IF terms has failed.

Note: The **ELSE** command can also be added in the Monitoring Definition Parameter's State! Tab with the same effect.

4.3.23 ELSE Object

Purpose — Add an **ELSE-Object** clause to the **IF-Object** clause.

Fields — None.

Details — Two lines are added to the actions command:

ELSE Object
ELSE-END Object

You can add action statements between the above lines, and these statements will execute only when the IF terms has failed.

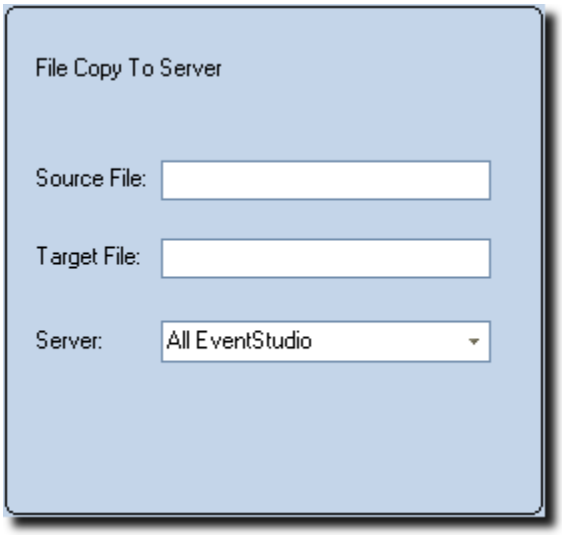
4.3.24 ELSE Parser

Purpose	Add an **ELSE Parser** clause to the **IF-THEN Parser** clause.
Fields	None.
Details	Two lines are added to the actions command: **ELSE Parser** **ELSE-END** You can add action statements between the above lines, and these statements will execute only when the IF Parser terms have failed. **Note**: The **ELSE Parser** command can also be added in the Monitoring Definition Parameter's State! Tab with the same effect.

4.3.25 Exit Rule

Purpose	Stop execution of the current Rule
Fields	None.
Details	Add the following line to the actions command: When Rule is triggered, the ACTION! commands are executed one by one from the first to the last statement. When during this process the Rule comes to this **Exit Rule** line, it stops execution. **Note**: The **EXIT Rule** command can also be added in the Monitoring Definition State! Tab with the same effect.

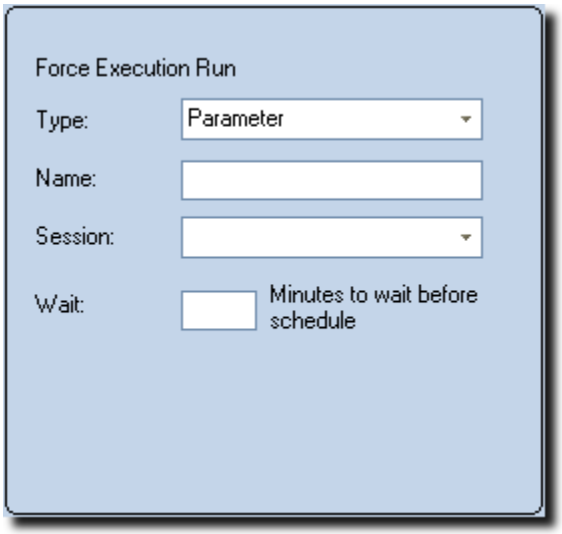
4.3.26 File Copy to Server



Purpose	Send file to EventStudio server.	
Fields	**Source File**	File to Send
	Target File	File name at Target server
	Server	EventStudio

Details

4.3.27 Force Execution



Purpose

Fields **Type**

Name

Session

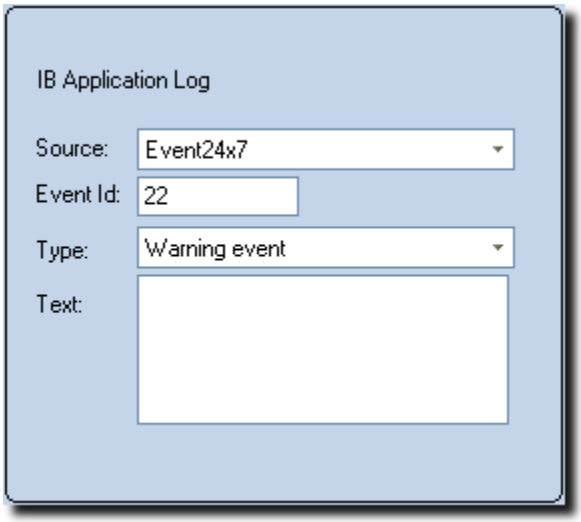
Wait

Details

4.3.28 HTTP

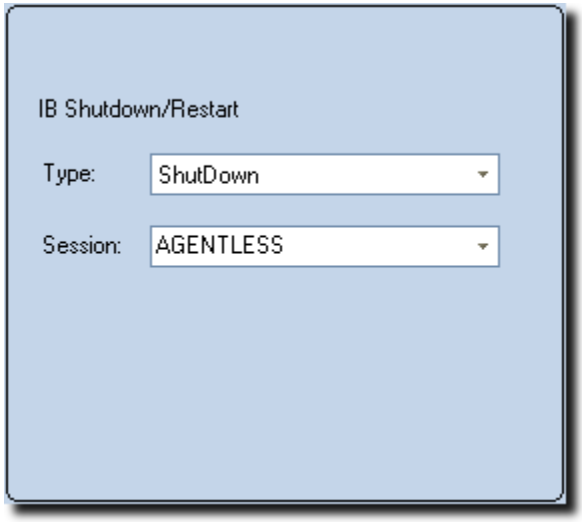
Purpose	Check availability of URL.		
mFields	**Type**	Object type. Choose one from the list: **Internal WinHttp** **External WGet.exe**
	URL	URL address to check.
	Proxy	Proxy server to be used.

4.3.29 IB Application Log Record



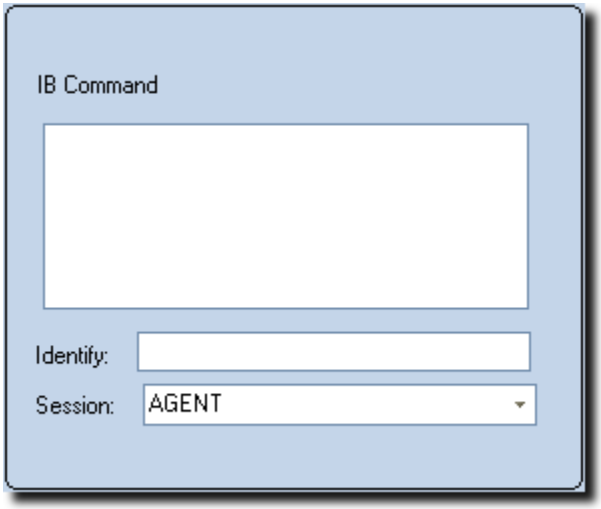
Purpose	Add a record to the Application Event Viewer	
Fields	**Source**	The originator of the new event viewer record. Can be either Event24x7 or NiceTrack.
	Event Id	Event ID of the new record.
	Type	Select between the supported types.
	Text	Contents of the new record.

4.3.30 IB Boot



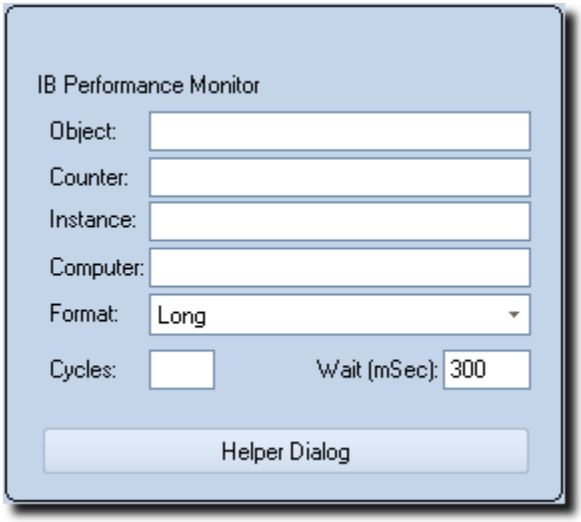
Purpose	Shutdown or restart the remote computer or device.		
Fields	**Type**	Choose action type: **ShutDown** **Restart** **Win32 Shutdown Options.**
	Session	Select session on which to perform above shutdown or restart operation.

4.3.31 IB Command



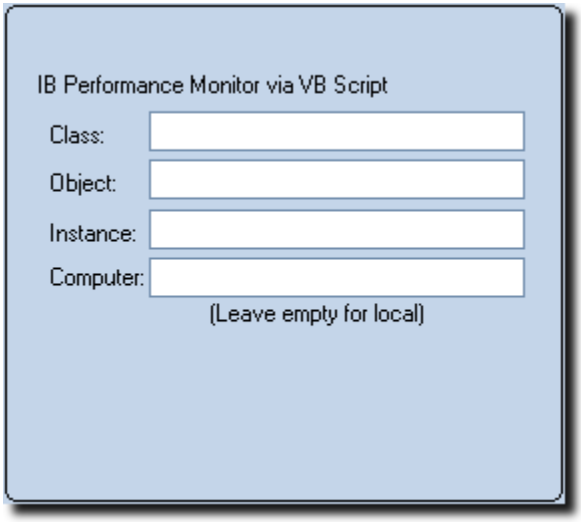
Purpose	Perform a command on local computer.	
Fields	**Command**	The command to perform.
	Identify	Identify the string that will be sent to the Focal Point.
	Session	The session to perform the IB command on.

4.3.32 IB Performance



Purpose	Retrieve values from the Windows Performance Monitor.	
Fields	**Object** **Counter** **Instance**	Performance monitor variable. For the correct value open the performance monitor and take the values from there.
	Computer	Computer name when required remote value. For local computer leave it blank.
	Cycles	Number of times to perform rechecks in order to ensure that the result is as precise as possible.
	Wait	Time to wait in milliseconds after each check before conducting a recheck.
Details	Retrieves performance Monitor values. Has similar values as the ones you get by running the Windows Performance monitor. Type **perfmon** from the command line. You can press the **Helper Dialog** button too to assist you in selecting the exact checks to perform from the perfMon.	

4.3.33 IB Performance VB Script



Purpose

Retrieve values from the Windows Performance Monitor via use of a VB Script.

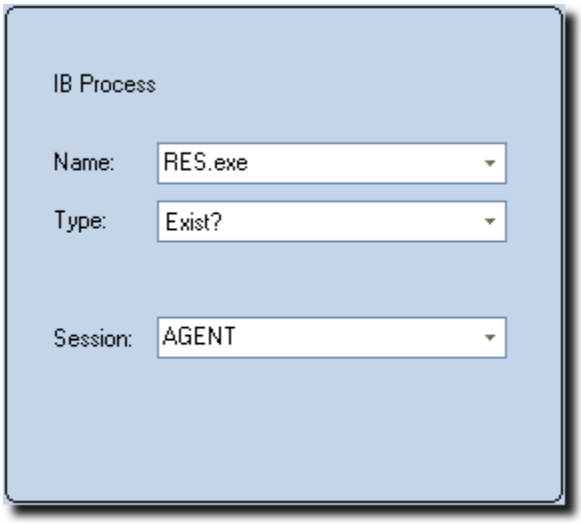
Class
Object
Instance

Performance monitor variable. For the correct value open the performance monitor and take the values from there.

Computer

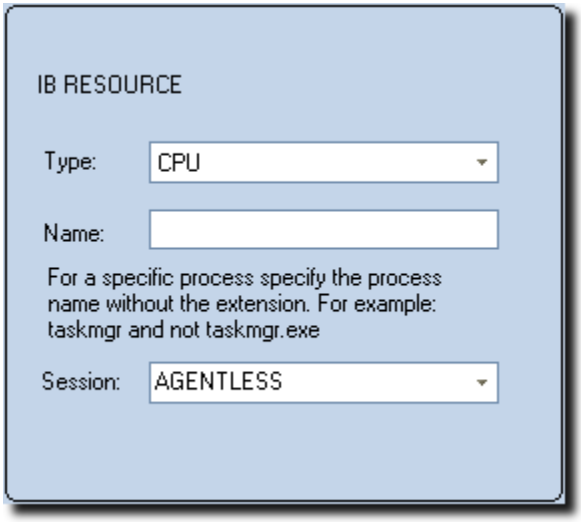
Computer name when required remote value. For local computer leave it blank.

4.3.34 IB Process



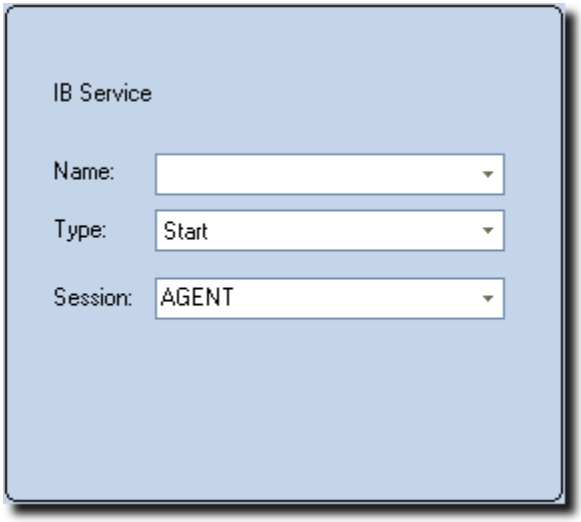
Purpose	Check Existence, Stop process or Create a new one.	
Fields	**Name**	Process Name. Expanding the combo box will bring the processes currently running on the desired session. Choose one of them.
	Type	Type of activity: **Exist?** **Terminate** **Create**
	Session	The session upon which you would like to perform the desired operation on a selected process.

4.3.35 IB Resources



Purpose	Check various NT resources on a selected session		
Fields	**Name**	Resource name. If remains Empty, return the Total value for the entire computer.	
	Type	Chose type from a list: **CPU** **Memory** **Handles** **Threads Count**	
	Session	Session upon which you desire to check the different resources.	
Details	Retrieve resources via performance Monitor.		

4.3.36 IB Service



Purpose — Handle Service activity on desired session.

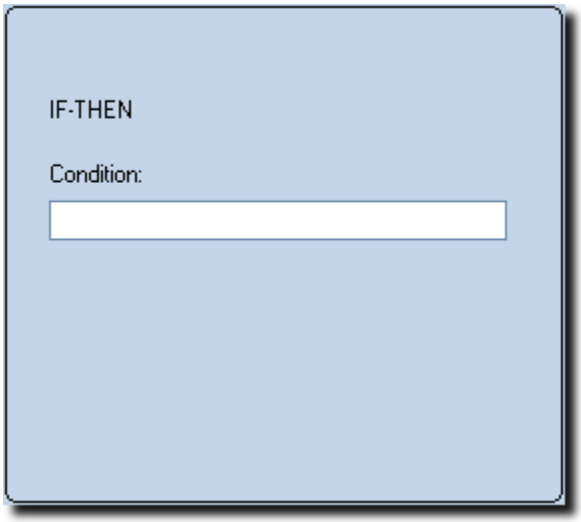
Fields

Name — Service name.
Opening the combo box will bring the services currently running on the desired session. Choose one of them.

Type — Chose type from a list:
Start
Stop
Status
Restart

Session — Session upon which you desire to perform the service type operation specified above.

4.3.37 IF



Purpose — Open an IF-THEN clause.

Fields

Condition — Specify expression.
If the expression is TRUE, the statements in the THEN group are executed.
If the expression is FALSE, the statements are not executed, unless there is an ELSE clause upon which the statements of the ELSE clause will be executed.

Details — Add the following three lines to the actions command:

IF expression
THEN
THEN-END

You can add action statements between the **THEN** and **THEN- END** lines, and they will be executed only when the IF expression is TRUE.

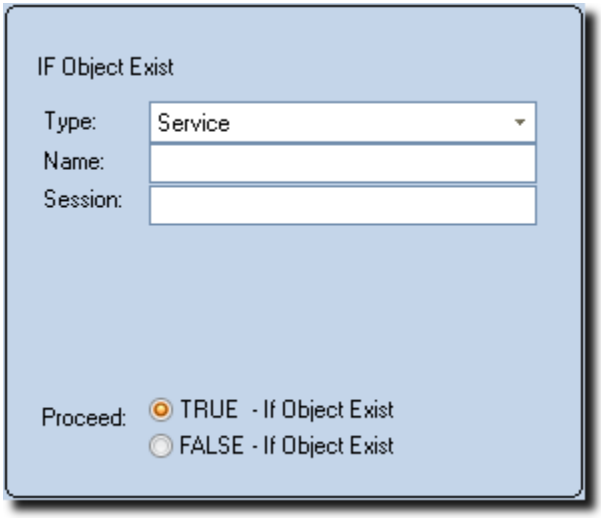
Operators:

+	Addition
-	Subtraction and unary minus
*	Multiplication
/	Division
^	Power
%	Modulo
&	Logical AND
|	Logical OR
!	Logical NOT
>, >=	Greater or equal
<, <=	Smaller or equal
!=	Not equal
==	Equal

General functions:

abs	fact	rand()
acos	floor	rand(min, max)
asin	hex	round
atan	if	sin
avg(x,y,z,…)	isNaN	sinh
bin	log	sqrt
ceil	log10	sum(x,y,z,…)
cos	max(x,y,z,…)	tan
cosh	min(x,y,z,…)	tanh

4.3.38 IF Object



Purpose	Open an IF-Object clause.	
Fields	**Type**	Service or Process
	Name	Object's name
	Session	Session's name
	Proceed	Select True if object exists or False if object exists.

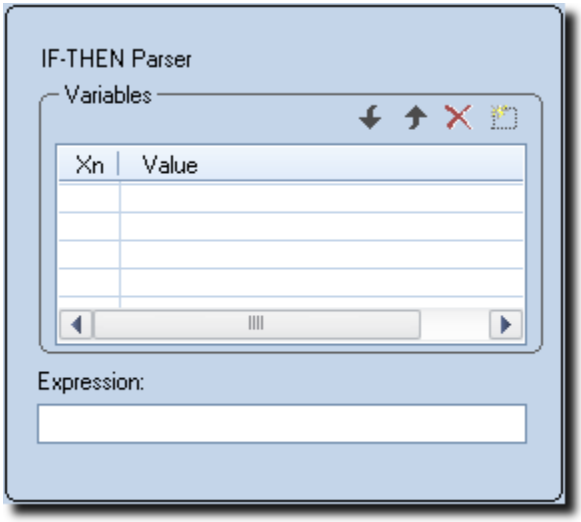
Details

Add the following three lines to the actions command:

IF Object expression
THEN Object
THEN-END Object

You can add action statements between the **THEN Object** and **THEN- END Object** lines, and they will be executed only when the IF expression is TRUE.

4.3.39 IF Parser

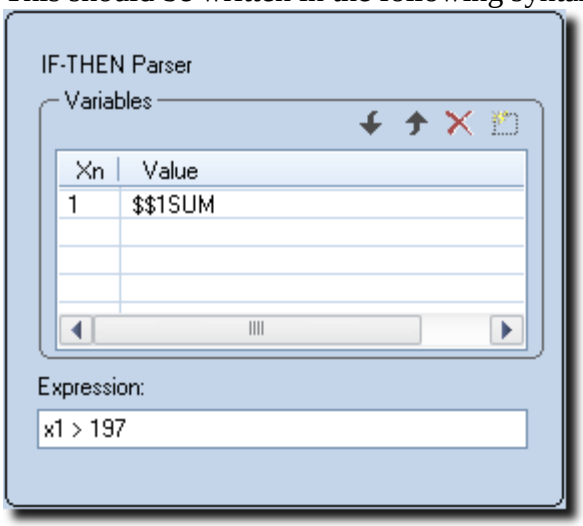


Purpose	Open an IF-THEN Parser clause. This IF clause is semi compiled for performance issues. On the first pass, Event24x7 compiles the statement into memory. From the second pass, it executes it in compiled manner. This improves dramatically the performance.	
Fields	**Xn**	Field number 1,2, …
	Value	User variable that matches the field number
	Expression	Expression to check.
Details	Add the following three lines to the actions command: **IF Parser** **THEN Parser** **THEN-END Parser** You can add action statements between the **THEN Parser** and **THEN- END Parser** lines, and they will be executed only when the IF Parser expression is TRUE.	

Example

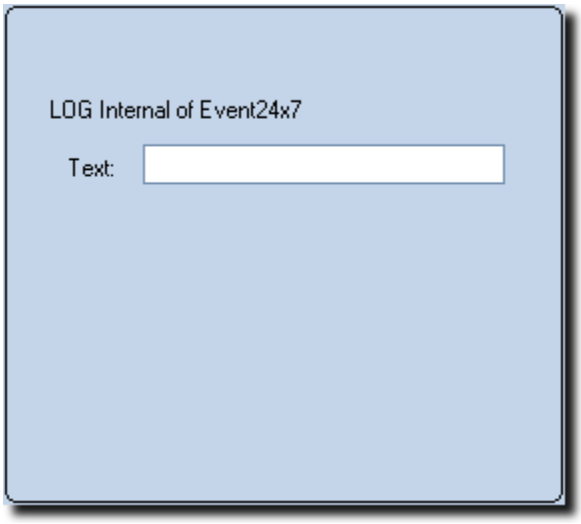
Suppose we need to check the following condition:
If $$1SUM > 197
(If user variable named SUM is greater than 197).

This should be written in the following syntax :



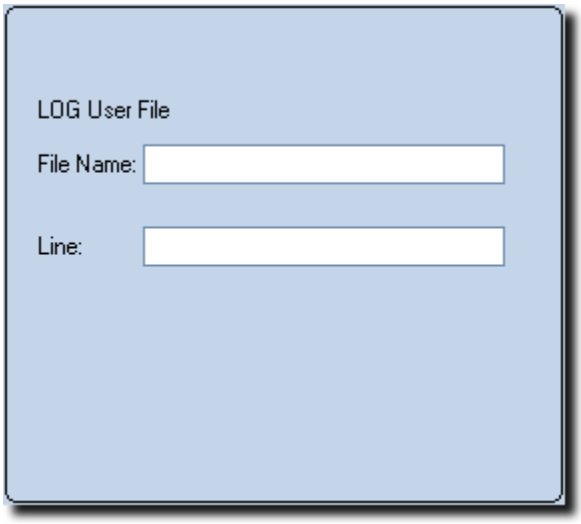
At each cycle Event24x7 will replace x1 with the current contents of $$1SUM. Then it evaluates the expression.

4.3.40 LOG Event24x7



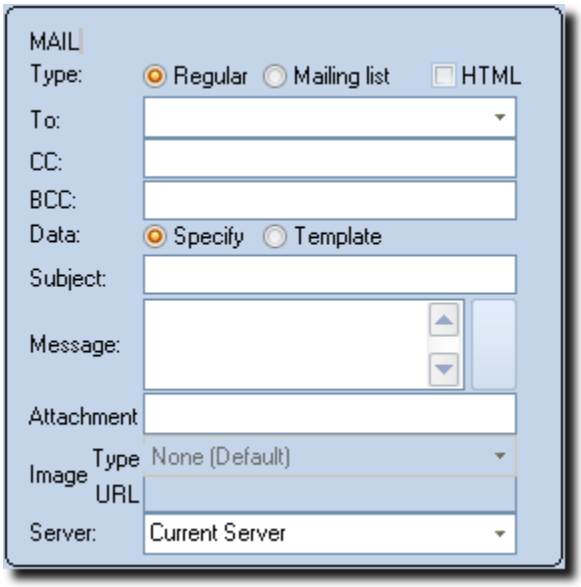
Purpose	Write a message to the CES or DES Server log file.
Field	**Text** Message to be added to the LOG file.
Details	Event24x7 Server has a log file, and every important event is written to the log file automatically. The Source part of the display message on the Focal Point appears as: **Rule:** Followed by the Rule name.

4.3.41 LOG User



Purpose	Create and handle a User log file for debug or control purposes.	
Fields	**File Name**	Name of the User file.
	Line	Line to be added. It can contain User or System variables.
Details	Event24x7 will append a line to the specified file. If the file doesn't exist Event24x7 will create it.	

4.3.42 Mail



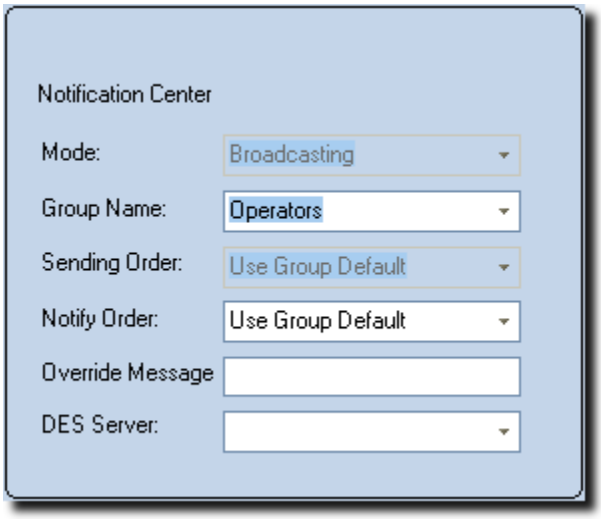
Purpose	Send email	
Fields	**Type**	Regular or Mailing List. Event24x7 Mailing list is saved in the Script Definition. For further information, please refer to the Script Definition section.
	HTML	Send mail with HTML support. • The content of the Message part will be sent with HTML heading format. • A new system variable $$#HTMLRESULTALL will print out the contents of the result (similar to $$#PRMRESULTCHECK) but with table HTML format.
	To, CC, BCC	Email addresses.
	Subject	Email subject.
	Message	Email content.

	Attachment	Optional attached file.
	Server	The mail server name.
Details	Email is sent automatically.	
	In order to send mail, two prerequisite terms must be set: • Event24x7 must have an Internet connection. • Enable Mail and the other Mail parameters must have been set successfully. This is done from the Server Configuration screen. See Mail section.	

4.3.43 Mail Status Run

Purpose	Verify that the Parameters executed. Produces mail report that highlight parameters that were not executed during tested period of time.	
Fields	**Mail Status Script**	Entry from Script Definition that contains control definition for the result.
	DES Target	DES server name that printers related to it.
	Shout (Hours)	Highlight parameters that were not executed during the tested time.
	Filter	Filter the target parameters for the report.
	Mail To	Mail Target
	Mailing List	Whether to use Event24x7 mailing list
	Server	Event24x7's server that will send the mail

4.3.44 Notification Center



Purpose — Use Notification Center to handle the alert.

Fields

Mode — Sending mode. Available options:
Complete (not available from rule).
Broadcasting.

Group Name — Group name for sending the notification to its recipients.

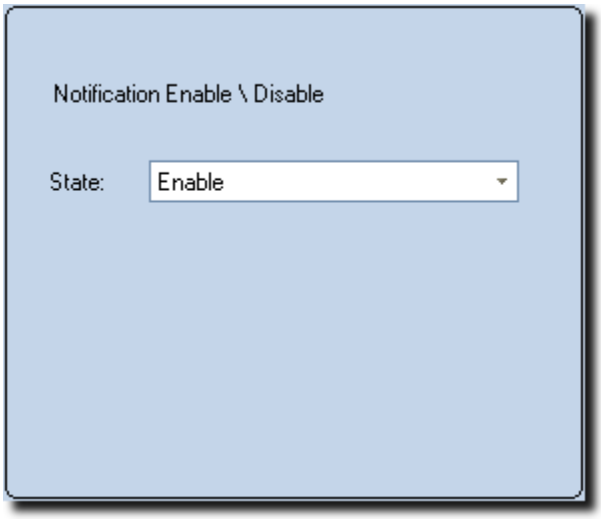
Sending Order — Sending order. Available options:
Use Group Default

All other options are not available from rule:
According to On Duty Calendar
According to Weekly Calendar
Recipient Order
Send to all Simultaneously

Notify Order — Notify order. Available options:
Use Group Default
Only mails
Mails and SMS
Only SMS
Start mail, Retries SMS
Start mail, Escalation SMS

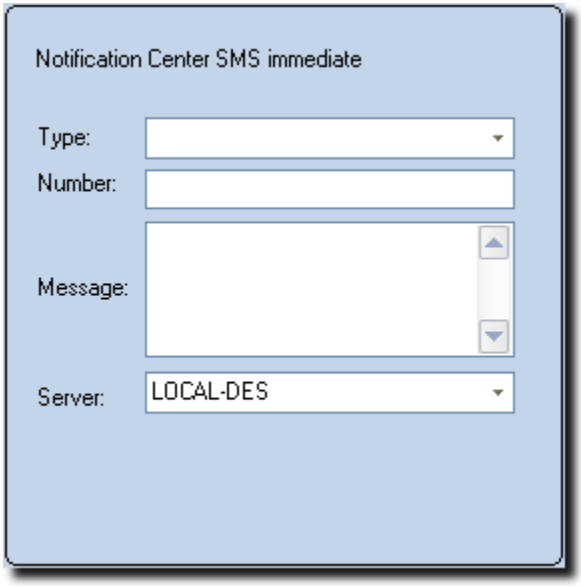
Details — Sending notifications using Notification Center.

4.3.45 Notification Enable/Disable



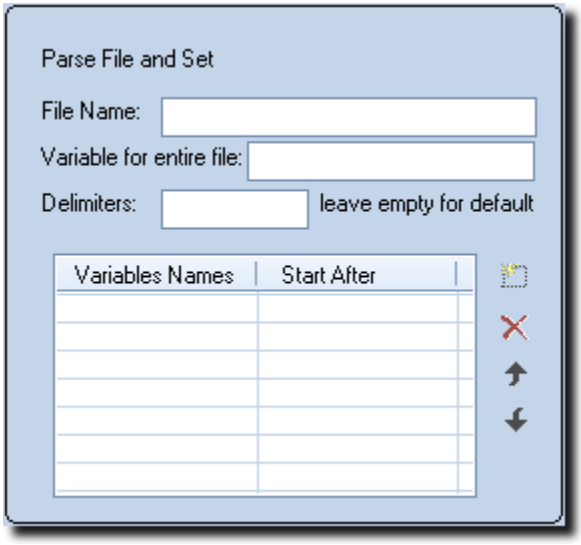
Purpose	Enable or Disable Notification Center.	
Fields	**State**	Set state for the Notification Center. **Options:** **Enable or Disable**

4.3.46 Notification SMS Immediate



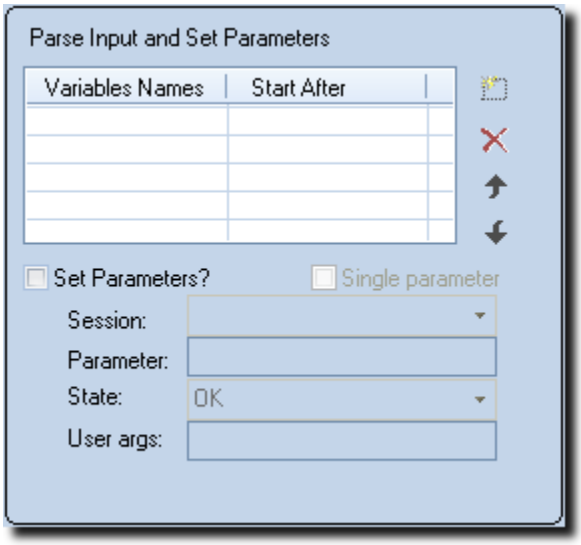
Purpose	Send immediate SMS.		
Fields	**Type**	Options: • **Notification Sending Order** • **Wireless Modem** • **SMS via Mail** • **SMS Provider**	
	Message	The message that would be sent to the recipient.	
	Server	The DES server that will be used to send the SMS.	
Details	The simplest way to send immediate SMS.		

4.3.47 Parse File and Set



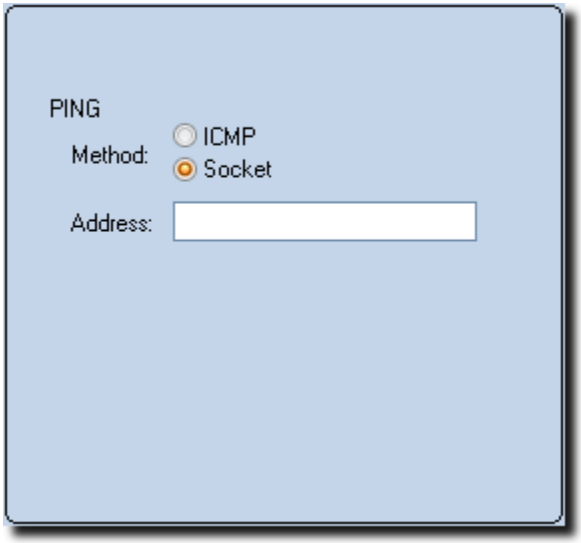
Purpose	Convert a file to variables. When the file has an internal structure of **Keyword=Value, Keyword=Value…** With this command you can create Event24x7 variables automatically.	
Fields	**File Name**	File name and path to convert.
	Variable for entire file	Variable name for the entire string in the file.
	Delimiters	List of characters that are used as delimiters between the input fields. Leave empty for default.
	Variable Names	The variable names.
	Start After	An Event24x7 search for the prefix and it creates a variable from the value that appears after this prefix.

4.3.48 Parse Input and Set



Purpose	Convert single message to parameters. When the incoming message has an internal structure of **Keyword=Value, Keyword=Value…** With this command you can create Event24x7 variables automatically. In addition, the variable can be sent to Parameters.	
Fields	**Variable Names** **Start After**	Provide the prefix and the parameter name. An Event24x7 search for the prefix and it creates a variable from the value that appears after this prefix.
	Set Parameter?	Send the variables to Parameters. (Dashboard).
	Single Parameter	If checked Event24x7 will send each variable separately to the parameters.

4.3.49 PING



Purpose — Perform Ping checks to a TCPIP address.

Fields

Address — TCPIP address to check. Format of IP is nnn.nnn.nnn.nnn or DNS name.

Details — Perform ICMP checks for this address.

If there is a connection to the checked address,

- $$RC variable returns 1.
- Message is written to the Event24x7 Log file containing the Hop Count. The message has severity of ERROR.

If there is no connection to the checked address:

- $$RC variable returns 0.
- Message is written to the Event24x7 Log file specifying the failure of the Ping command.

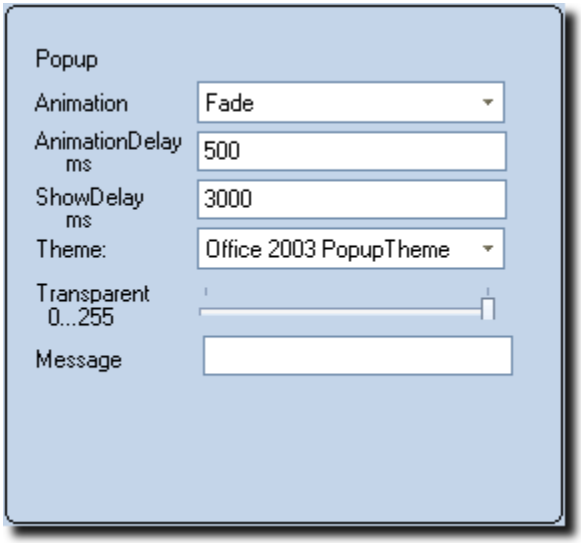
Example

```
PING      myserver
IF        $$RC  ==  0
THEN
   DISPLAY  Not Exist
THE-END
```

4.3.50 Play File

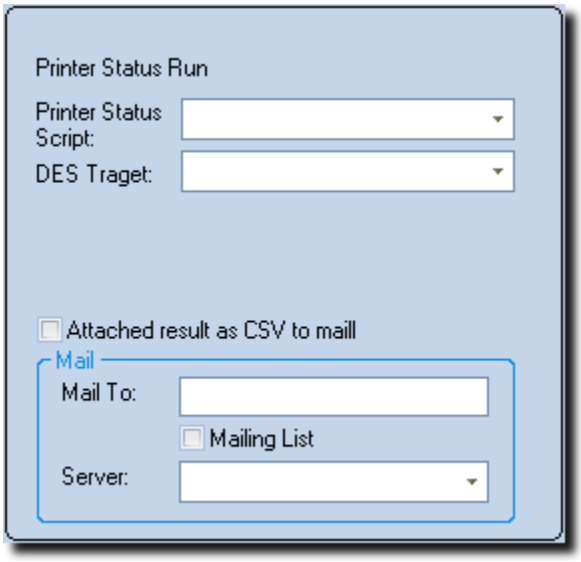
Purpose	Play audio file to take the operator attention
Fields	**Full file name to play**
Server	On what server to play the specified audio file. Options are: **All EventStudio, Current Server, CES Server, LOCAL-DES** and **REMOTE-DES.**
Details	Event24x7 will start the suitable program according to the file extension.

4.3.51 Popup



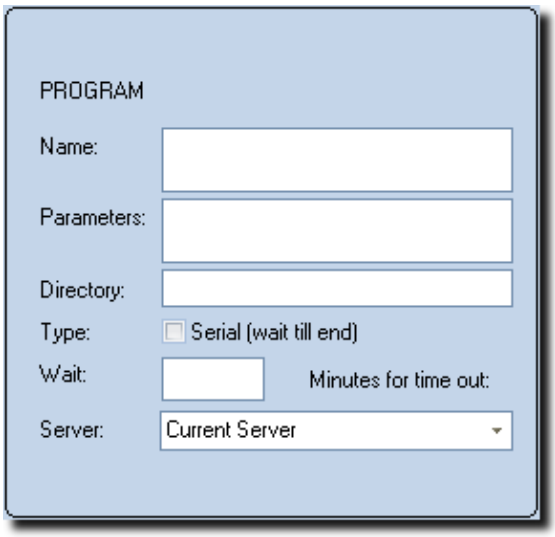
Purpose	Popup a window message on the Studio. This is one of the notification options available.	
Fields	**Animation**	Control how the popup window appears
	Animation Delay **Show Delay** **Theme**	Type of popup window
	Transparent	Transparency of the popup
	Message	The main message to display
Details	This is similar to exchange popup window when a new mail arrives.	

4.3.52 Printer Status Run



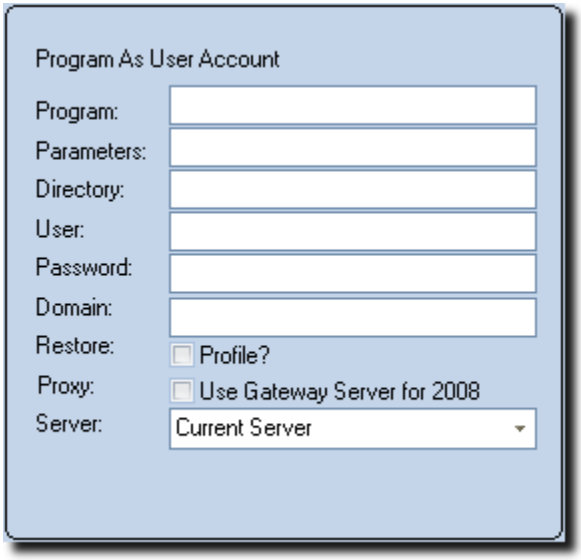
Purpose	Schedule printers counters report via mail. The format of the report determine by the Printer Status Data command from the Script Definition.	
Fields	**Printer Status Script**	Entry from Script Definition that contains control definition for the result.
	DES Target	DES server name that printers related to it.
	Attached result as CSV to mail	Optionally attached the report as CSV to the mail.
	Mail To	Mail Target
	Mailing List	Whether to use Event24x7 mailing list
	Server	Event24x7's server that will send the mail
Details		

4.3.53 PROGRAM



Purpose	Run a program on a specific server	
Fields	**Name**	Name and path of the program
	Parameters	Run time parameters for the program
	Directory	Directory path.
	Type	Tick this box, if you wish to wait until file execution ends before continuing. Otherwise, program will execute in parallel to other operations.
	Wait	When executing in Serial mode, allow time in minutes for program execution to end.
	Server	The server upon which the program will be executed. Available options: Current Server, CES Server, LOCAL-DES and REMOTE-DES.
Details	There are no specific rules how to use Name, Parameters and Directory. It is similar to using Win32 API CreateProcess.	
Example	Run program check_instant_messages, Type: serial, Wait: 2 minutes.	

4.3.54 Program As User



Purpose

Run a program under a specific user credentials.

When a program must be started with a certain user credentials like a program that reads from SQL, and the SQL authentication is Login User.

Fields

Program Name and path of the program

Parameters Run time parameters for the program

Directory Directory path.

User User name

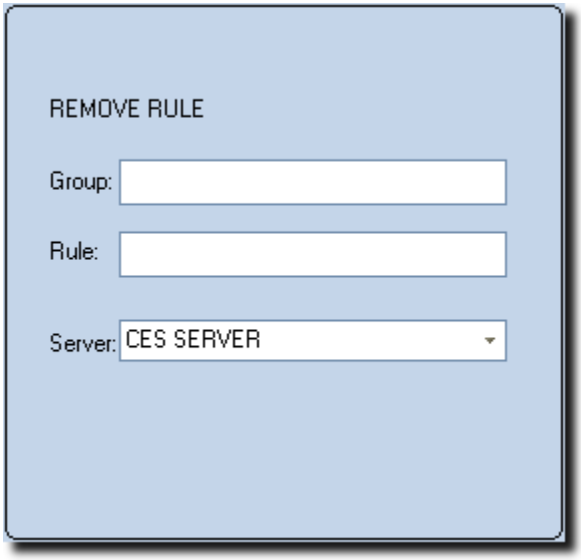
Password Password

Domain Network Domain name

Restore Option to restore the User profile

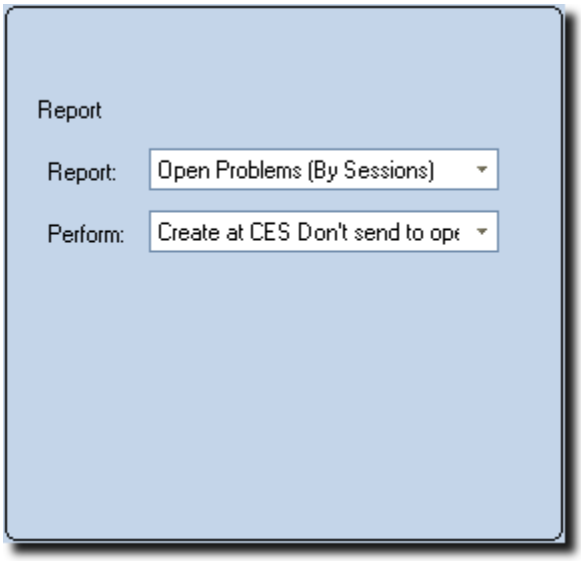
Server Event24x7 server upon which to start the program. This is transparent the program execution within its own servers.

4.3.55 Remove Rule



Purpose	Remove single Rule or Group of Rules from the Rule System.	
Fields	**Group**	Rule Group's name.
	Rule	Rule name. If the Rule name's field remains empty the action removes the entire Group.
	Server	The Event24x7's server from which to remove the rule.
Details	Remove the rule or the entire Group from the Rules Active list. This will prevent the removed rules from being triggered. The Remove statement has the same effect as performing the Remove command from the Rule Status screen.	

4.3.56 Report



Purpose — Write a dynamic report of open problems – so one can go over it later.

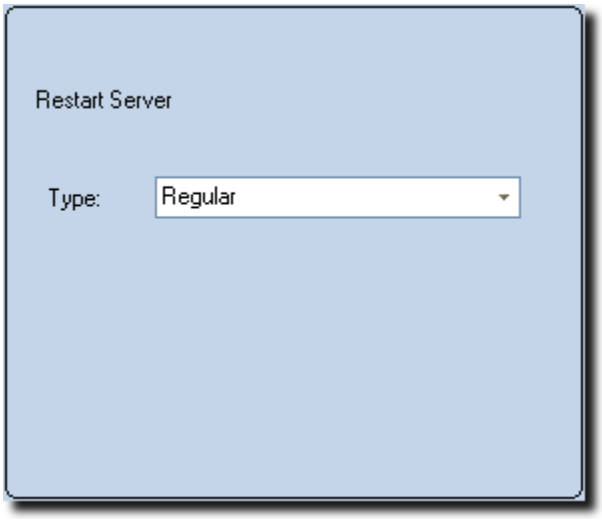
Fields

Report — What to report – two available options – **Open Problems (By Sessions)** – All the sessions listed one by one with a sub-list of all the open problems pertaining to each session.
Open Problems All – All opened problems listed unsorted in no specific order.

Perform — Where to save and/or display the results of the report specified – 3 available options:
Create at CES Don't send to open Studio –
The results are saved and updated on the CES folder but not on the EventStudio folder, thus will not be displayed on the Event24x7 Reports window.
Send Report to open Studio (Open browser) -
The results are saved and updated on both the CES and the EventStudio folders as well as being automatically opened for the user in a browser window display.
Send Report to open Studio (Don't Open browser) -
The results are saved and updated on both the CES and the EventStudio folders but without being displayed (You must do it yourself via Event24x7).

Details — Use in case of critical or important triggers so you will keep a record of their occurrence.

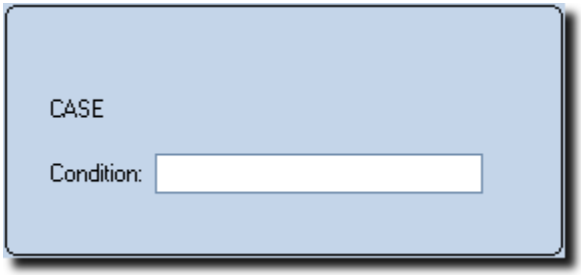
4.3.57 Restart Server



The command has no dialog.

Purpose	Restart the server the current session is connected to.

4.3.58 SELECT



Purpose — Open a **Select** clause.

Fields

Condition — Specify expression.
If the expression is TRUE, the statements in the CASE group are executed.
If the expression is FALSE, the next CASE expression is examined.

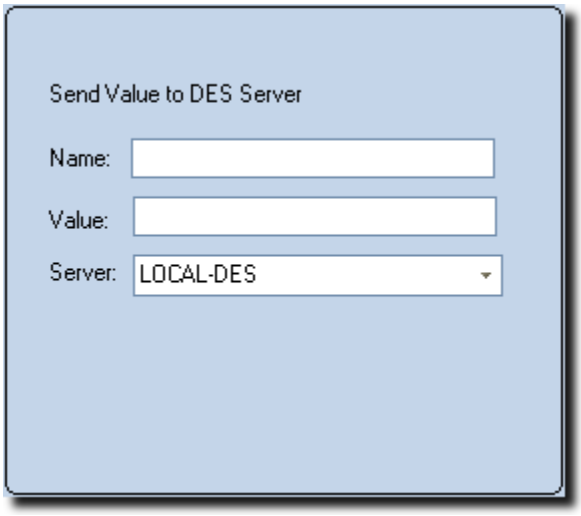
Details — Add the following four lines to the actions command:

SELECT
CASE expression
CASE-END
SELECT-END

You can add action statements between the **CASE** and **CASE-END** lines and they will be executed only when the **CASE** expression is TRUE.

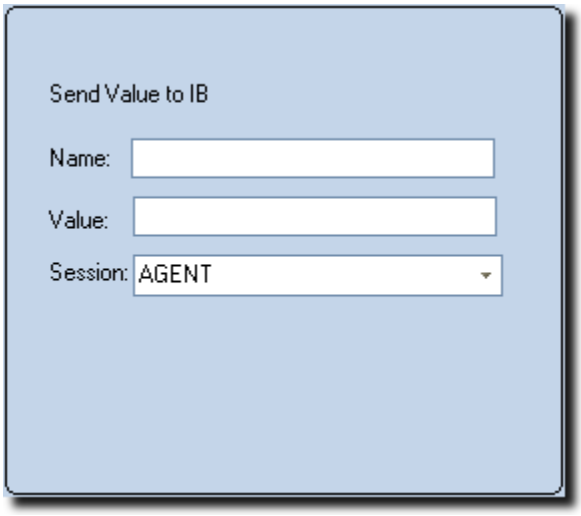
You can add several **CASE** statements in the **SELECT**. Only the first **CASE** clause that its expression is true will be executed among all the **CASE** statements.

4.3.59 Send Server



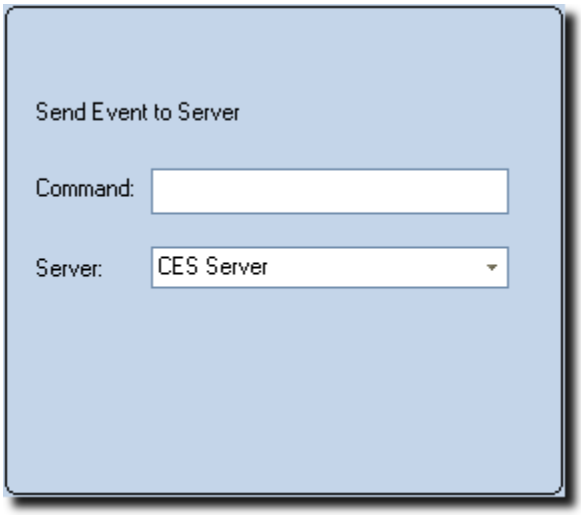
Purpose	Send a User Variable From the CES server to the DES Server	
Fields	**Name**	Variable name. Do not prefix the name with $$.
	Value	Variable value.
	Server	The Event24x7's DES server for which to send the User's Variable to.
Details	Mechanism to pass values from CES to any one of the DES. The User Variable will have the Server scope at the DES side.	

4.3.60 Send Value



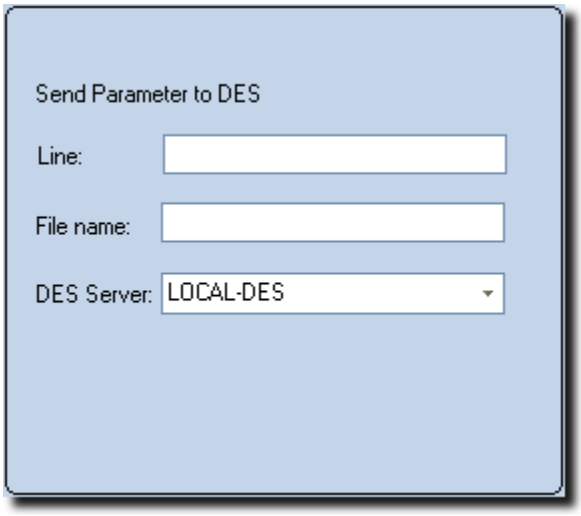
Purpose	Send User Variable From CES to DES or from the DES to the RES.	
Fields	**Name**	Variable name. Do not prefix the name with $$.
	Value	Variable value.
	Session	Agent name running on the RES machine
Details	Mechanism to pass values from CES to DES or to any one of the RESs. The User Variable will have the Server scope at the RES side.	

4.3.61 Server Command



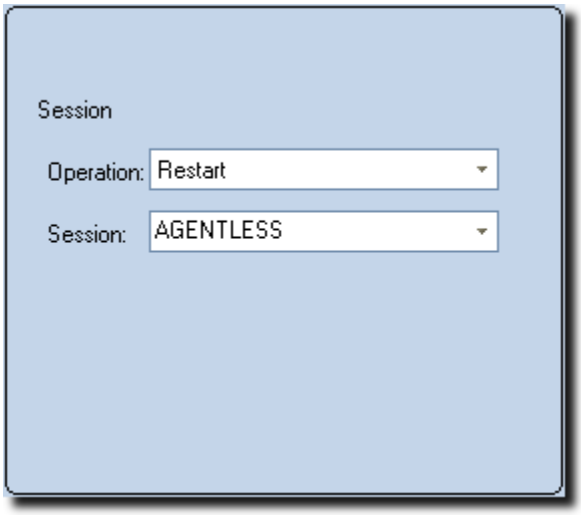
Purpose	Send Event to Focal Point	
Fields	**Command**	command
	Server	CES or DES
Details	This is the Event24x7 command line. On CES you can type any command at the Focal Point window that might trigger What? Command rule. Actually only CES has real Focal Point window. The Server Command lets you act like each DES has a virtual Focal Point as a command line. Same rule with What? Command active at DES will be triggered upon this Event.	

4.3.62 Server Parameter



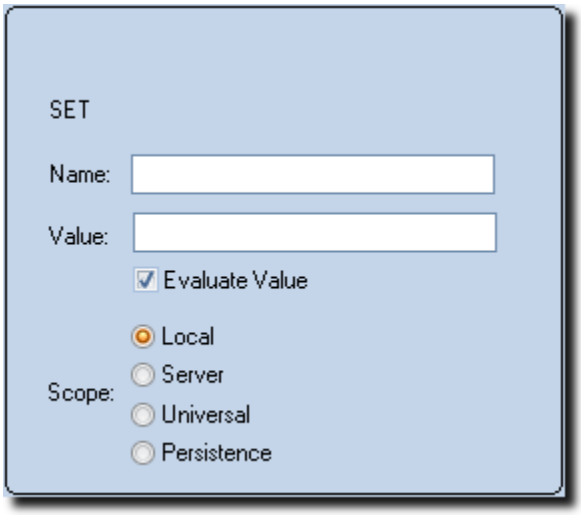
Purpose	Let Collector use values gathered by Rule.	
Fields	**Line**	Line that contains the parameter's values.
	File name	The values are created as a file that the collector can use. Specify this same name when you define the collector that uses the Line.
	DES Server	DES name that will receive the Line.
Details	This command is used as a bridge with the Parameters system. Usually the collector performs a command or action to get some object values. The "Server Parameter" command allows use of values created by Rule in the parameters.	

4.3.63 Session



Purpose	Stop / Start Session dynamically		
Fields	**Operation**	Operation options:	
		• Restart If the session Active close it first. Always Start the session at the end. . • Stop • Assure Active. If the session is already Active - do nothing. If the session is not active – perform Restart. • Load session from file (.ses)	
	Session	Session Name	
Details	The Session command lets you Stop or Start a session from a Rule, the same way as you do it from the Session Definition screen		

4.3.64 Set



Purpose — Set value to an Event24x7 User Variable.

Fields

Name — Variable name.
Do not prefix the name with $$.

Value — Variable value.

Evaluate Value — Check this field when setting a numerical value. It provides the possibility to set string fields.

Scope — Variable scope.

- **Local** — Local variable lives in the scope of the rule it is executing at. The moment the rule processing is terminated, the variable is destroyed. Local variables can't be accessed by other rules.
- **Server** — Server Variables scope is limited to the server they were created on. It can be a DES or a CES server. The variable can be accessed by any rule as long as it runs on the same server.

Universal	Universal Variables can be accessed by any rule that runs on any server in the Event24x7 cluster.
Persistence	Guarantees that the variable's value is saved in a file every time the SET command is executed. This is done to ensure that the variable's value is not lost upon restart of the Event24x7 Application.

Details

Add a User Variable, and set it's value.

If the variable doesn't exist, Event24x7 will add it.
If it already exists, a new value is set.

When a Global variable is set, the variable can be viewed from the Variable Status screen. See Special Variables and Variables Status sections.

Example

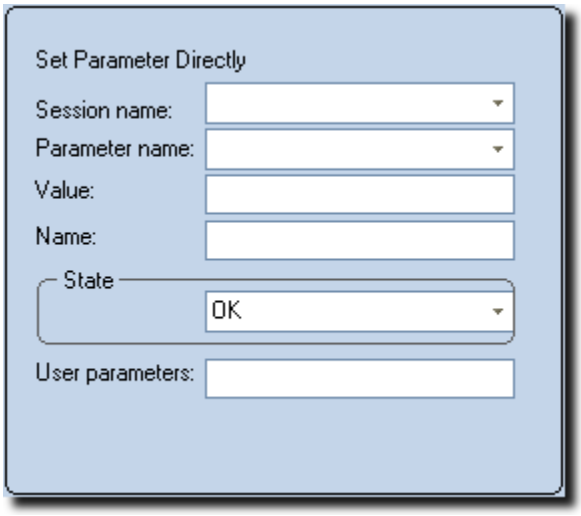
For cases that a counter is required. To increase such a counter, the user must enter the following data in the screen above:

Name: COUNTER
Value: $$1COUNTER + 1
Scope: Local

The Name field doesn't contain the $$ sign.
Event24x7 knows that it's related to User Variables.

The Value field must contain the $$1 to tell Event24x7 to take the current value of the Local User Variable COUNTER and increase it by one.

4.3.65 Set Parameter



Purpose

Send Value directly to Parameter.
It is used with a Collector that is defined as "Disable When?" (This disables the parameter from being performed every cyclic interval but only when the rule containing this action is triggered).
It means that the Collector doesn't collect data. The parameter retrieves data from an external source: this rule or another parameter.
This statement sends a direct value to the Parameter. The Parameter isn't initiated by the Collector but only upon the arrival of this command.

Fields

Session Name — The Parameter's Session name.

Parameter Name — Name of the Parameter

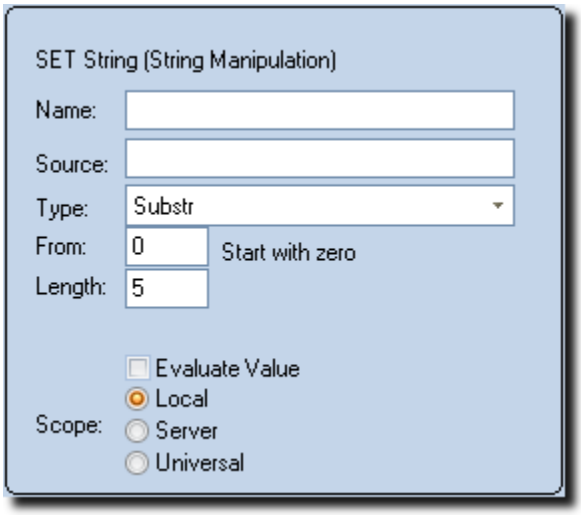
Value — The Parameter's Value

Name — The Name field of the value.

State — Set the Parameter's state. It can set it in advance to OK, Warning, Error or Severe.
It can be set to "Use Parameter State? Tab" and then the parameter itself will set the state according to the State? Evaluation.

User Parameters — Can pass user arguments as input to the parameter. It can be used at the Parameter's side as $$#WORD1, $$#WORD2, etc.

4.3.66 Set String



Purpose

String Manipulation.

It takes an existing Event24x7 variable (System or User) as input and lets you create a new variable by applying string manipulation.

Fields

Name Event24x7 variable name that is used as input.

Source Name of the Parameter.

Type Action type:
Substr
Left
Right
Before String
After String
Before Delimiter
After Delimiter

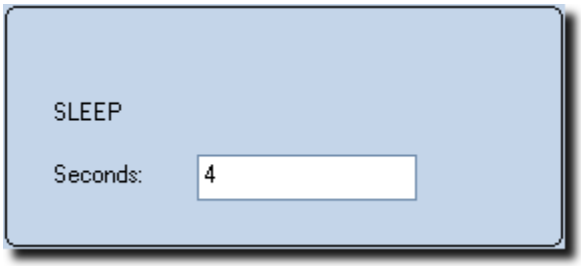
From
Length Position where to start and the length of the target

Evaluate Value Check this field when setting numerical values. It provides the possibility to set string fields.

Scope Variable scope.

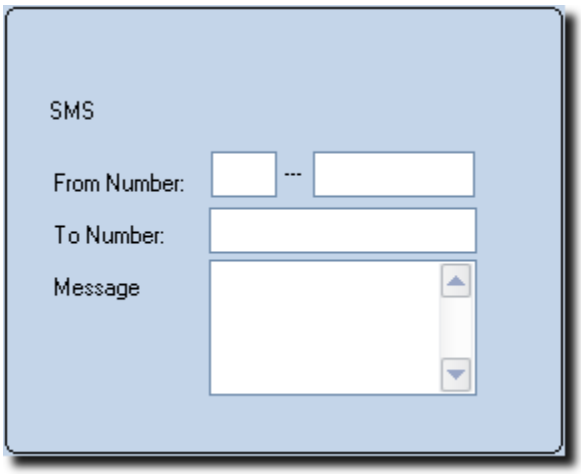
Local	Local variables live in the scope of the rule they are executing at. The moment the rule processing is terminated, the variable is destroyed. Local variables can't be accessed by other rules.
Server	Server Variables scope is limited to the server they were created on. It can be a DES or CES server. The variable can be accessed by any rule as long as it runs on the same server.
Universal	Universal Variables can be accessed by any rule that runs on any server in the Event24x7 cluster.

4.3.67 Sleep



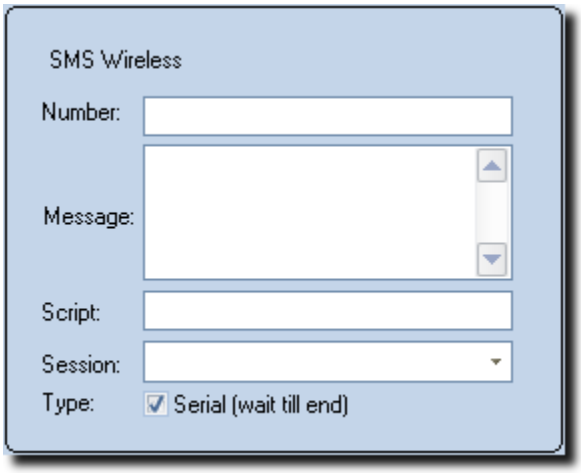
Purpose	Delay rule execution.	
Fields	**Seconds**	Delay seconds.

4.3.68 SMS



Purpose	Send SMS messages.	
Fields	**From Number**	Sender
	To Number	Target of the message
	Message	SMS message body
Details	Send an SMS message. Sending SMS is based upon SMS2U package. You have first to acquire the SMS2U licenses.	

4.3.69 SMS Wireless



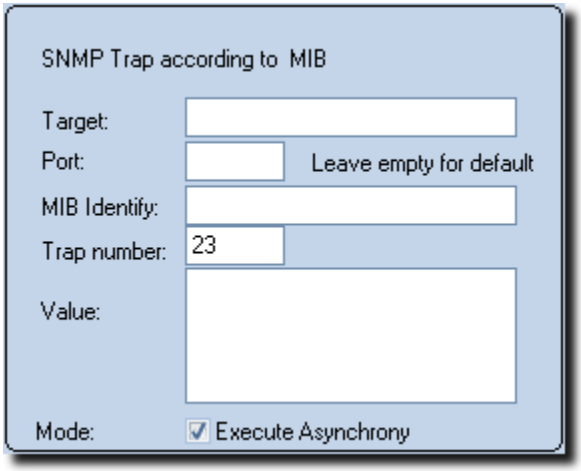
Purpose	Send SMS via cellular modem.	
Fields	**Number**	Sender
	Message	SMS message body
	Script	Event24x7 script that defines the protocol Event24x7 should use in order to send the SMS.
	Session	Event24x7 Session name for the cellular modem.
	Type	Option of serial sending the SMS. In this way it is possible to check the return code for success.
Details	The advantage of using a cellular modem is by the fact that it doesn't need internet to send the SMS. It is based upon a cellular modem that is connected to Event24x7 via a serial connection. You have first to define the Serial session in Event24x7 that connects to the cellular modem, and then define the script that tells Event24x7 the AT commands required to handle the SMS. Please look at the **Siemens** script that defines how to use a Siemens **MC45** cellular modem.	

4.3.70 SNMP MIB Interactive

Purpose	Get or Set SNMP mib object	
Fields	**Type**	Type of request: Get or Set
	Target	IP address of the target.
	Community	
	Port	Port number. Default port number is 162
	OID	Object Identifier of Get or Set

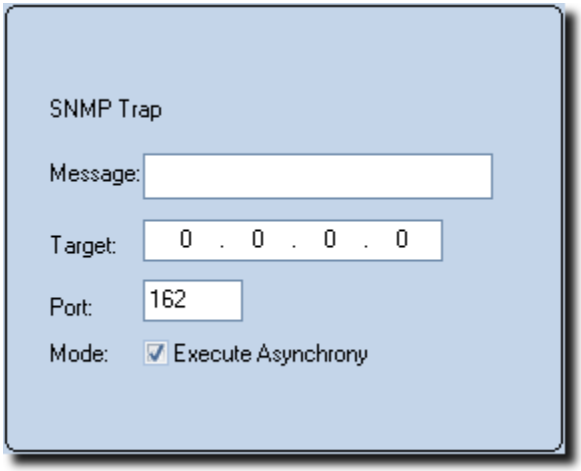
Details

4.3.71 SNMP Mib Trap



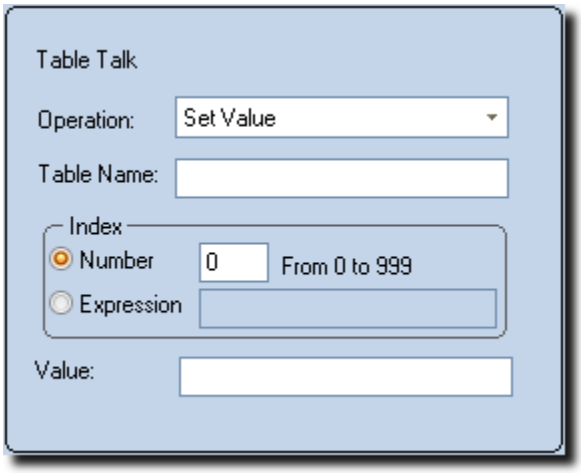
Purpose	Send SNMP Trap according to Mib	
Fields	**Target**	IP address of the target.
	Port	Port number.
	Mib Identify	Mib name taken from Mib Definition screen
	Trap Number	
	Value	Values of the trap according to the mib. Values should be separated by commas.
	Mode	By default sending of SNMP is done synchronously by Event24x7 - one by one. Checking the Mode field will cause Event24x7 to open a new process for sending the trap and as a result will be done asynchronously.
Details		

4.3.72 SNMP Send Trap



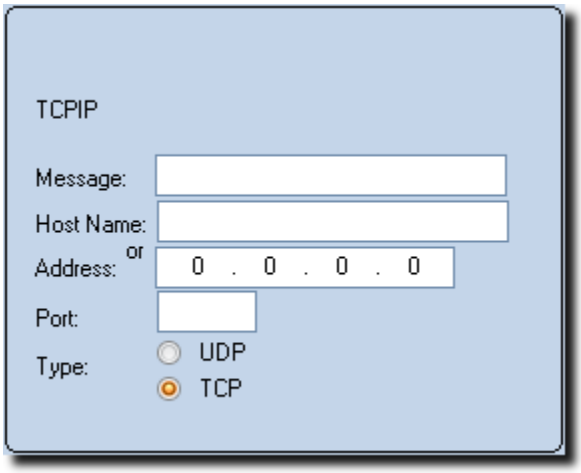
Purpose	Send SNMP Trap message.		
Fields		**Message**	Message to send.
		Target	IP address of the target.
		Port	Port number.
		Mode	By default sending of an SNMP message is done synchronously by Event24x7. Checking the Mode field will cause Event24x7 to open a new process for sending the message and as a result, it will be done asynchronously.
Details	Send SNMP message. The SNMP well known port is 162. You can override the Port by a different one.		

4.3.73 Table Talk



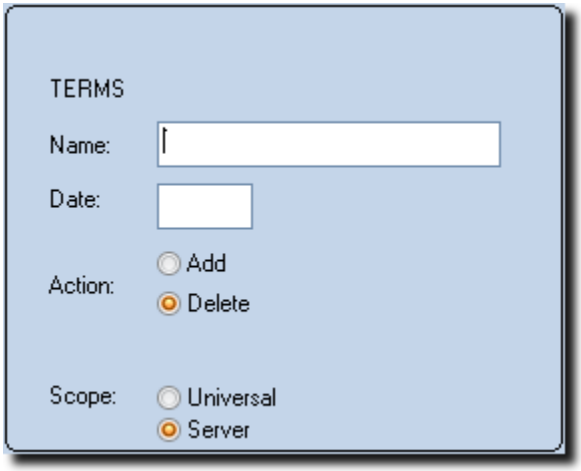
Purpose	Let's you manage dynamic arrays in the memory directly from the Action! Or State? tabs. You can store values, perform adding and subtraction, get Totals, Minimum, Maximum and Average on the fly.	
Fields	**Operation**	One of the following: Set Value Increase Decrease Get Value Total Min Max Average
	Table Name	Array name.
	Index	Array entry from 0 to 999.
	Expression	Option to calculate the array entry on the fly
	Value	Value.
Details	This feature helps you maintain counters.	

4.3.74 TCPIP



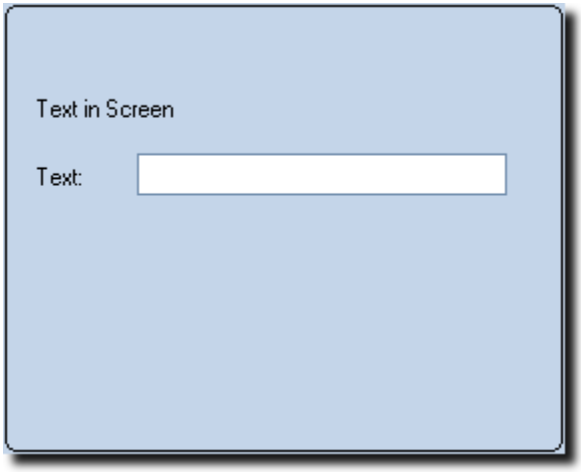
Purpose	Send TCPIP packet.		
Fields	**Message**	Message to send.	
	Host Name	DNS name of target location.	
	Address	IP address of target location.	
	Port	Port number.	
	Type	Protocol type:	
		UDP	User Datagram Protocol (UDP)
		TCP	Transmission Control Protocol (TCP)
Details	The UDP connectionless datagram delivery service is unreliable because it does not guarantee data packet delivery and no notification is sent if a packet is not delivered. Also, UDP does not guarantee that packets are delivered in the same order in which they were sent. TCP is the default.		

4.3.75 Terms



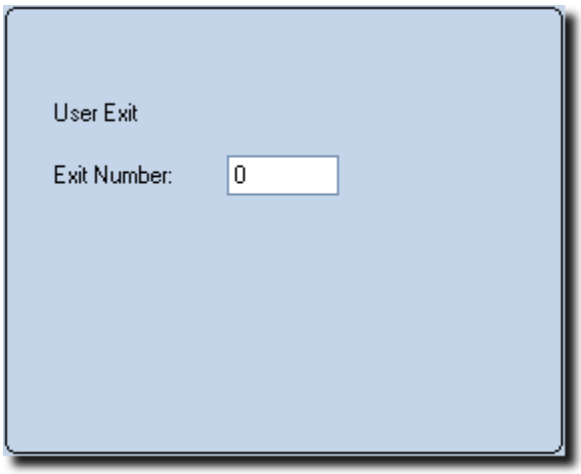
Purpose	Add or Remove a Term.	
Fields	**Name**	**Term** Name
	Date	Term Date is in the format of MM/DD. This is an optional field, and if it is not present, it is treated as dateless.
	Action	Type of action. **Add** – Add Term. **Delete** – Remove Term.
	Scope	**Server –** Effective within the scope of the same server they were created on **Universal –** Effective in the entire Event24x7 namespace.
Details	A Term can be established as a criteria for triggering a Rule.	

4.3.76 Text In Screen



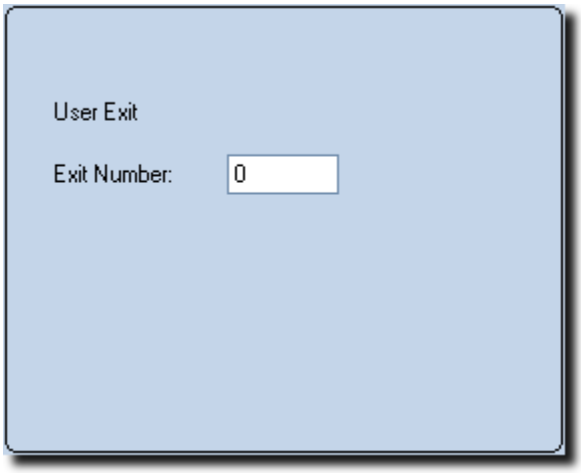
Purpose	Search for a specific text in the Session's terminal.	
Fields	**Text**	Text string that you are searching for.
Details	Use for Scripts to handle in automatic login. For example, you might wish to search for a requested user name before entering the user name: If text is found on the screen, then $$RC is set to 1. If it isn't found, $$RC is set to 0.	

4.3.77 User Exit



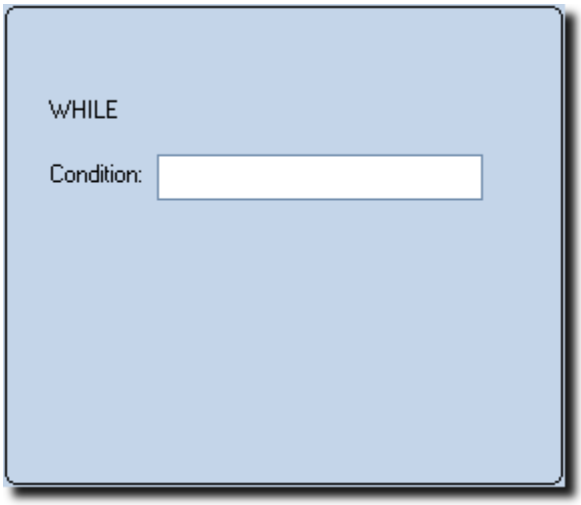
Purpose	Execute a DLL or a specific DLL function at this point in the Action! Tab. The details of this DLL or DLL function name are specified one level up in the parameter's Collector in it's Execution Tab.	
Fields	**Exit Number**	Acts as an identification number for the executing DLL.
Details		

4.3.78 VOICE



Purpose	Send a Voice Request to EventVoice for execution.	
Fields	**Name**	Voice Definition script.
	Type	Tick this box, if you wish to wait until script file execution ends before continuing. Otherwise, the program will be executed in parallel to other operations.
	Wait	When executing in Serial mode, allow time in minutes for program execution to end.
Details	Voice request might have a Return Code. Special system variable **$$RC-VOICE** holds the return code.	

4.3.79 WHILE



Purpose	Open a WHILE clause.		
Fields	**Term**	Specify expression.	
		If the expression is TRUE, the statements in the WHILE group are executed.	
		If the expression is FALSE, the first statement after the WHILE-END clause is executed next.	
Details	Add the following two lines to the actions command: **WHILE** expression **WHILE-END**		
	You can add action statements between the **WHILE** and **WHILE-END** lines, and they will be executed only when the WHILE expression is TRUE.		

4.4 Information Base Definition

An Information Base resides on the remote machine and checks it consistently and efficiently, in a proactive approach. The Information Base can:

- Allow for local checks on the agent platform of facilities such as NT log files, CPU usage, memory usage, hard disk space, processes and services.
- Monitor local applications, acting upon Information Base rules to keep the application on track.
- Support a proactive approach in which you define the steps to be taken in order to prevent problematic situations automatically.

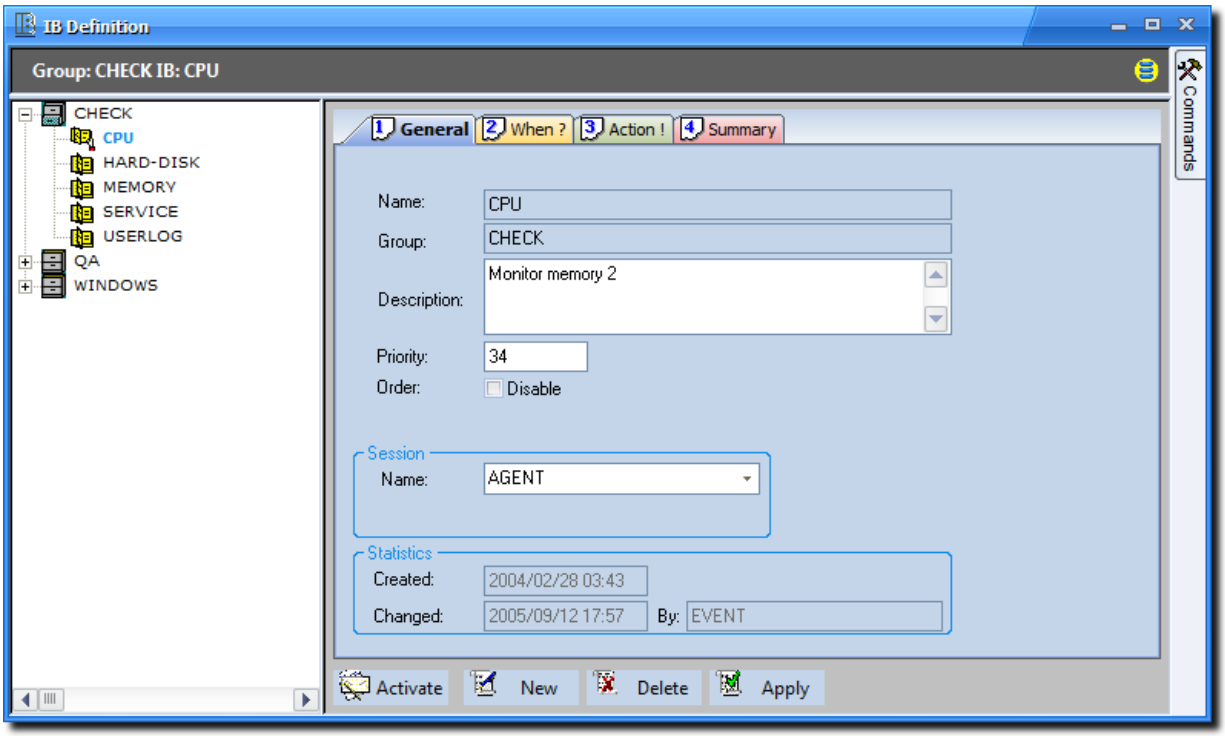
The predefined Information Base defines the statuses of the objects and the steps that should be taken in order to prevent problematic situations automatically. For example:

IF	CPU threshold is higher than 90%
AND	process MyServer has more than 75 open handles
Action!	Restart service CheckHandles.

There are two ways to define and configure the different IBs (Information Base Elements) via Event24x7 (as explained in sections **4.3.1** and **4.3.2**).

4.4.1 IB General Definition

The 1st way is by defining each IB that exists in the monitoring system and only then the session to which it belongs. We do this by pressing the **Ibs Definition** button underneath the **Definitions** Tab which results in the following screen:



4.5 Information Base & Rules

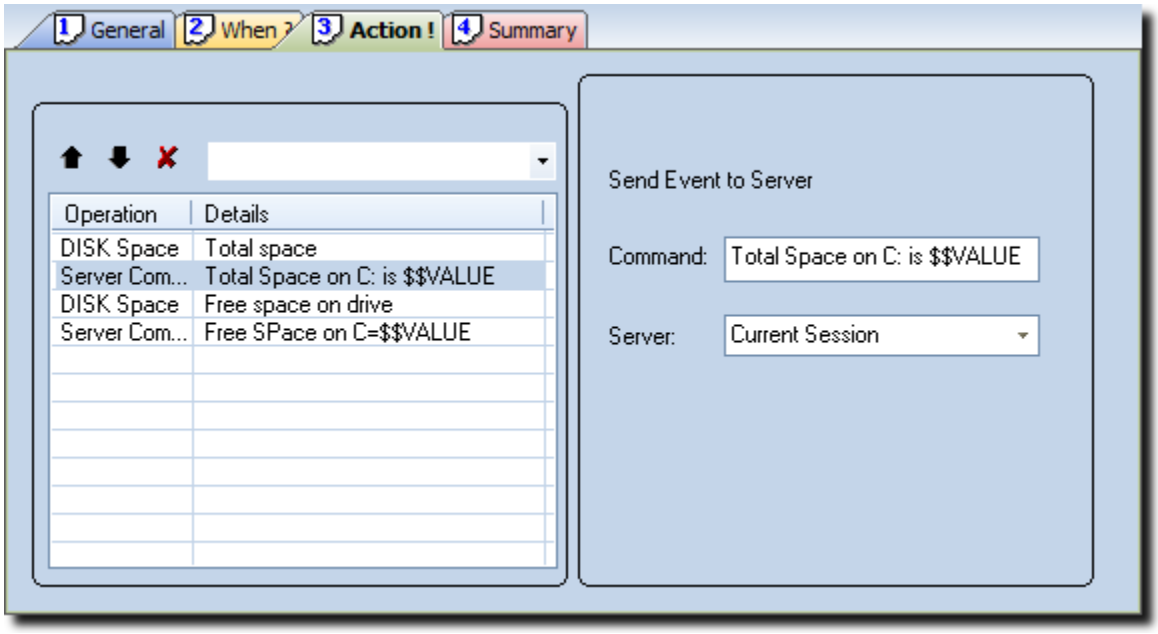
Information Base definition screen is similar to the Rules Definition screen. The What? and Terms tabs are not part of the IB.

The IB is not triggered by incoming events but starts periodically based upon timing and scheduling. A rule is always executed at the Event24x7 Server (CES or any DES) machine. However, the Information Base (IB) is executed at the remote machine where an Event24x7 RES (Smart Agent) is running. When the IB is activated, the Event24x7 server sends the IB to the RES. In the RES it is scheduled for running.

For explanation on the General and When? tabs refer to General Tab and When Tab sections in the Rule definition chapter.

4.5.1 Action! Tab for Information Base

Action! Tab defines the action commands to execute.



A pull down menu allows for a selection of actions, many of which are the same as those in the Rule Action! section.

Activate IB	Activate Information Base at a remote session.
Activate Rule	Activate a rule or group at Event24x7's server.
Activate Workflow	Activate a Workflow.
Alert	Open a new Alert at the alert windows.
Backup	Backup the whole monitoring solution on the RES.
Beep	Generate a “Beep” sound.
Case	Add an **CASE** line to the **SELECT** statement.
Command	Issue a command to the session.
Command DOS	Issue a DOS command.
Command PsExec	Issue a PsExec command on remote computer.
Command Special	Send special character keys to a session: Enter Tab, Reset, home, New-line.
CTM Condition	Handle CONTROL-M conditions.
CTM Jobs	Orders or forces jobs from a Scheduling table.
CTM Load set	load-balancing algorithm for CONTROL-M
CTM Resource	Performs operations on the Quantitative Resources table.
CTM Shout	Sends a message to the specified user or destination.
Directory Watch	Report on any file changes at the specified directory.
Display	Display a message to the focal point
Else	Add an **ELSE** line to the **IF-THEN** statement.

Else Parser	Part of the **If Parser** command – the statements following the Else parser are performed when the IF parser conditions are not met.
Exit Rule	Stop the execution of the current rule.
File Copy to Server	Send file to EventStudio
File Find	Find files with specific attribute at a specified directory
HTTP	Check availability of URL.
IF	Open **IF-THEN** statement**.**
IF Object	Open **IF-Object** statement.
IF Parser	Open **IF-THEN** compiled statement – like IF but for multiple conditions.
Log Event24x7	Write a text message to CES or DES Even24x7 log file.
Log User	Send a text message to the CES log.
Mail	Send an email notification.
Mail Status Run	Send Parameters status via mail.
Notification SMS Immediate	Send an immediate SMS notification.
Parse File and Set	Convert a file to Event24x7 variables.
Parse Input and Set	Convert a single message to Event24x7 variables. Optionally you can send them to Parameters.
Ping	Check address for connection.
Play File	Play file to get the operator's attention.
Popup	Display a variety of notification popup windows.
Printer Status Run	Schedule report via mail with printer counters.
Program	Execute any external program at the Server machine.
Program as User	Execute any external program under User credentials.
Remove Rule	Remove a rule or group from memory.
Report	Save a report for Open Problems on Event24x7.
Restart Server	Restart current Event24x7 server.
Select	Open **Select** statement.
Send Server	Send User Variable from CES to DES
Send Value	Send User Variable value to a session
Server Command	Simulate receiving command to the Focal Point.
Server Parameter	Send Parameter to DES.
Session	Stop/Start session.
Set	Create and assign values to a User Edit variable.
Set Parameter	Set a value to a Parameter bypassing a Collector.
Set String	String manipulation.
Sleep	Sleep for a specified amount of seconds
SMS	Send SMS message via internet.
SMS Wireless	Send SMS message via cellular modem
SNMP Mib Interactive	Send or Get or Set SNMP requests for SNMP objects.
SNMP Mib Trap	Send a SNMP Mib Trap.
SNMP Send Trap	Send a simple SNMP Trap.
Table Talk	

Tcpip	Ability to manage dynamic arrays in memory on the fly
Terms	Send a TCP/IP packet to host.
Voice	Add or delete a term
while	Start Event24x7 IVR request. Open **DO-WHILE** statement.

There are also commands that apply to a particular operating system that the RES (smart agent) runs on, each is prefixed with IB.

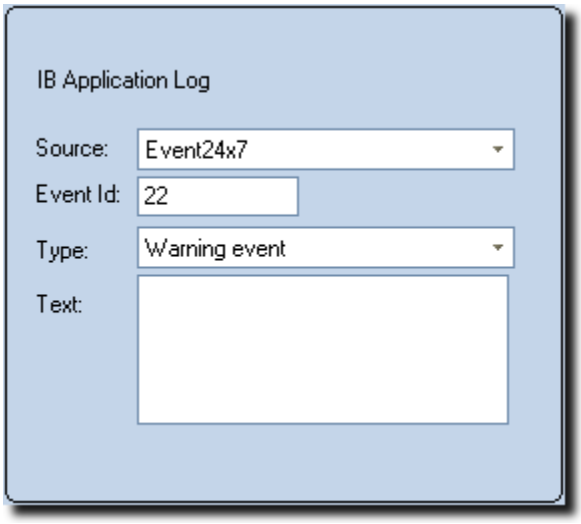
IB Application Log Record	Add a record to the Application Event Viewer
IB Application Pool	Handle IIS application pool.
IB Boot	Restart or shut down the machine.
IB Command	Specific command to run on the Information Base.
IB Consuming Processes	Check for CPU consuming processes on local computer.
IB Database	Perform database queries on local computer.
IB Debug	Create Log file for the running IB and set its debug level.
IB Disk Space	Check for disk space: total disk space, free disk space or available space for the calling program.
IB Existence	Check for existence of a file, process or service.
IB Handling Directory	Handle a directory on local machine.
IB Handling File	Handle a file on local machine.
IB HTTP	Check availability of URL.
IB Memory	Memory utilization, total physical memory size, available physical memory size, paging file size, and more memory variables.
IB NT Log Watch	Watch Application for the NT Log files: Security, System or Application.
IB Performance	Provide Performance Monitor (perfmon) values.
IB Performance VB Script	Provide Performance Monitor values via VB script
IB Port Scan	Scan ports in TCP or UDP mode.
IB Process	Check for running processes on IB and start or stop one
IB Resources	Check CPU, memory, handles or thread count.
IB Service	Start a service.
IB User Folder Watch	Perform User Folder's Files Watch.
IB User Log Watch	Watch any user log file. It could be a simple text file or some application log file.
IB WMI Command	Perform a WMI command on the local RES.

In addition there are also group of Directory and File Watch.

Directory Watch	Report on any file changes at the specified directory.
File Find	Find files with specific attribute at a specified directory

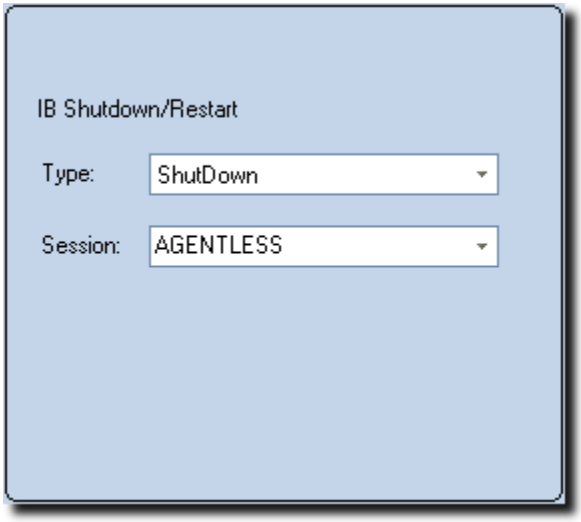
4.6 Action! Parameters for Information Base

4.6.1 IB Application Log Record



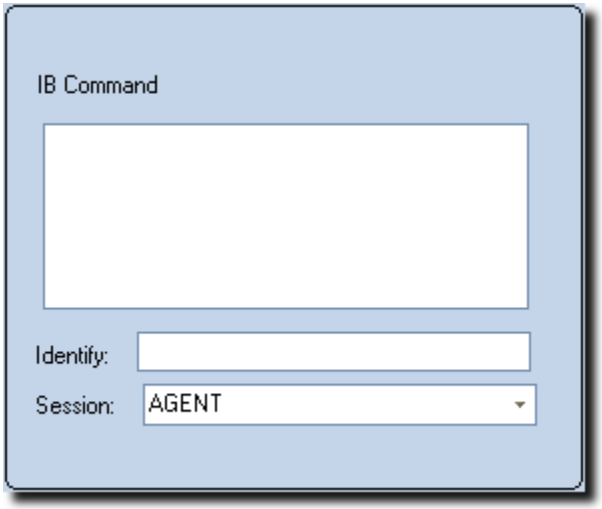
Purpose	Add a record to the Application Event Viewer	
Fields	**Source**	The originator of the new event viewer record. Can be either Event24x7 or NiceTrack.
	Event Id	Event ID of the new record.
	Type	Select between the supported types.
	Text	Contents of the new record.

4.6.2 IB Boot



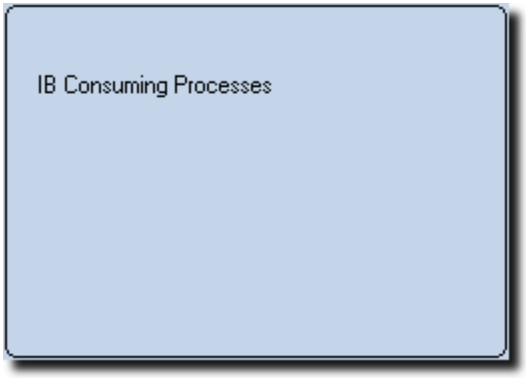
Purpose	Shutdown or restart the remote computer or device.		
Fields	**Type**	Choose action type:	
		ShutDown **Restart** **Win32 Shutdown Options.**	
	Session	Select session on which to perform above shutdown or restart operation	

4.6.3 IB Command



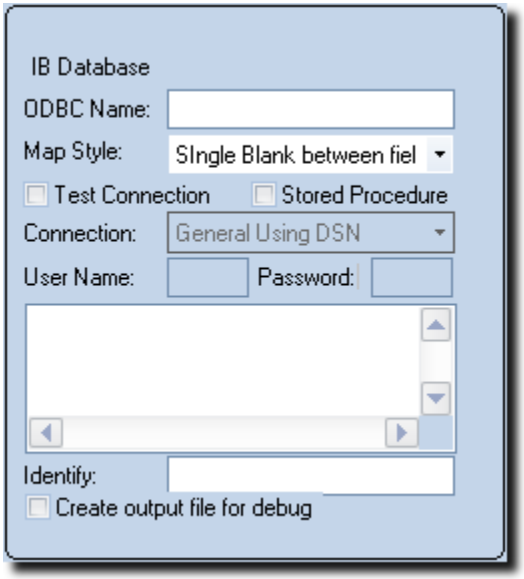
Purpose	Perform a command on local computer.	
Fields	**Command**	The command to perform.
	Identify	Identify the string that will be sent to the Focal Point.
	Session	The session to perform the IB command on.

4.6.4 IB Consuming Processes



Purpose Check for CPU consuming processes on local computer.

4.6.5 IB Database



Purpose — Perform database queries on local computer.

Fields

ODBC Name — ODBC Name. You have to define ODBC connection from "ODBC Data Source Administrator".

Map Style — Format of the results.

Test Connection — Relates to the Connection Pool handling. Only the StatusDB command should have this field checked.

Stored Procedure — Check this field if you activate Stored Procedure.

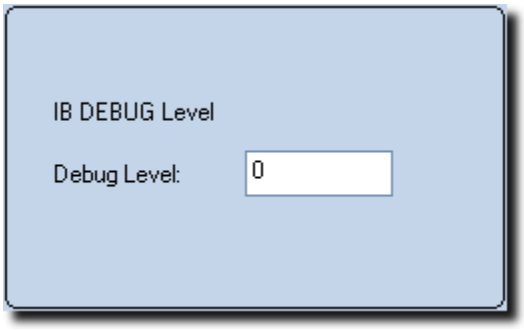
User Name — User Name for authentication.

Password — Password for authentication.

Identify — Identify string to intercept the result at the Exception pane

Create output file for debug

4.6.6 IB Debug



Purpose — Create Information Base local log file, or set the debug level.

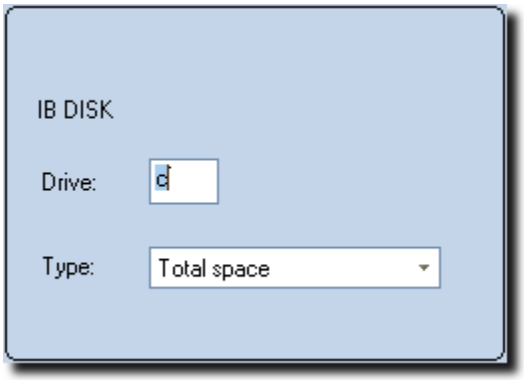
Fields — **Debug Level** Set debug level. Accepted values:

- 1 Minimal. Write a message only by user specific log command.
- 4 Medium. Write lines for the command and for the result.
- 8 Maximum. Write a line for the original, a line after AutoEdit , and a line for the result.

Details — Information Base can optionally create a local log file to audit the IB activities. Every action is written to the log file according to the Debug Level.

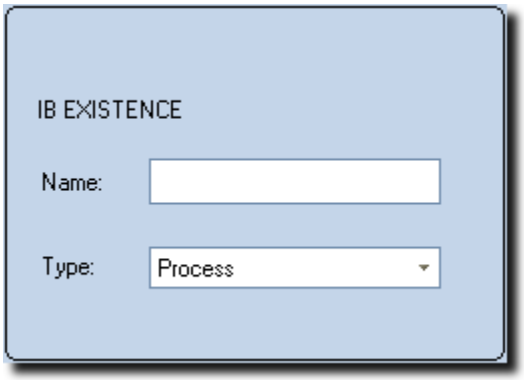
The log file name is located at the <RES Target Dir>\Log
And the file name has the following structure:
<IB name>-IB <time>(<thread id>)
Where:
IB name – Name of the Information Base
Time – Current time in format of HHMMSS
Thread id – Current thread of the Information Base

4.6.7 IB DISK Space



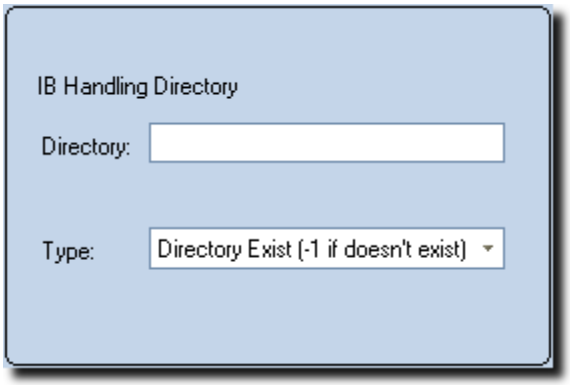
Purpose	Check Disk space.		
Fields	**Drive**	Drive letter (c, d, etc).	
	Type	Disk space check type. Choose one from the list: **Total space** **Free space on drive** **Available space to caller**	
Details	The result of the check is returned as follows: $$RC : 0-Operation failed, 1-Operation succeeded. $$VALUE : If operation succeeded, this value shows the result of the check.		
Example	**DISK Space** **Message**	Total space for c: Total Size= $$VALUE	
	Verify Total Disk Space on Drive C and display result on the Event24x7 Server Focal Point.		

4.6.8 IB Existence



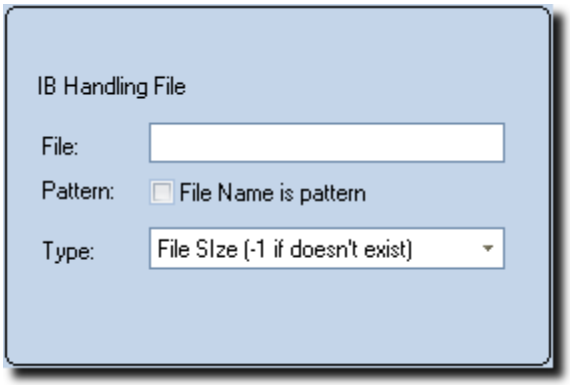
Purpose	Check existence of objects.	
Fields	**Name**	Object name to check.
	Type	Object type. Choose one from the list: **Process** **Service** **File** **Directory**
Details	If checked and object exists $$RC is set to 1. If checked and object doesn't exist $$RC is set to 0. For **Directory** type, it returns the number of files in the specified directory.	

4.6.9 IB Handling Directory



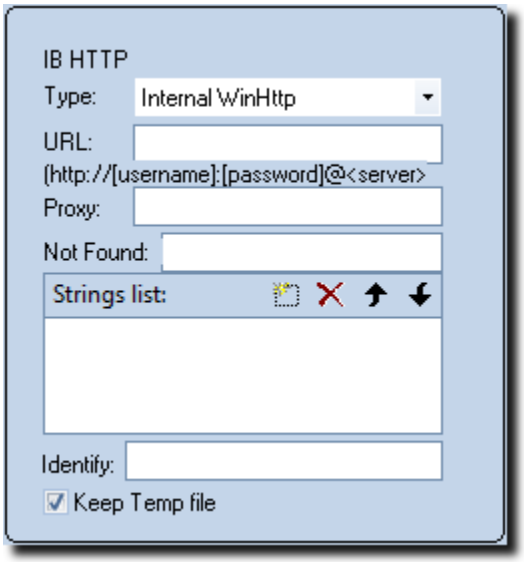
Purpose	Handle a directory.	
Fields	**Directory**	Directory's name
	Type	Object type. Choose one from the list: **Directory Exist** **Directory Creation Time** **Directory Last Access Time** **Count Files in Directory** **The Recently Updated File**
Details	Perform checks on a directory.	

4.6.10 IB Handling File



Purpose	Handle a file.		
Fields	**File**	File's name	
	Pattern	Check if file name is a pattern	
	Type	Object type. Choose one from the list: **File Size** **Created Date** **Last Access**	
Details	Perform checks on a file.		

4.6.11 IB HTTP

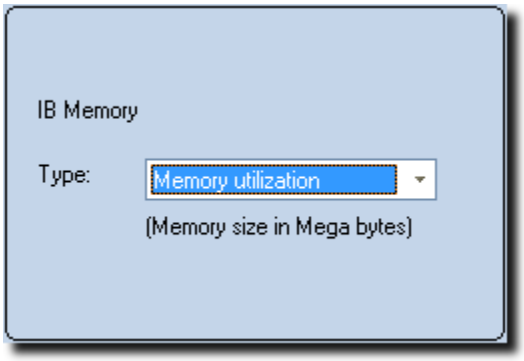


Purpose — Check availability of URL.

Fields

Type	Object type. Choose one from the list: **Internal WinHttp** **External WGet.exe**
URL	URL address to check.
Proxy	Proxy server to be used.
Not Found	Not Find string
String list	String list to look for on URL page.
Identify	Identify string to intercept the result at the Exception pane
Keep Temp file	Tick this checkbox if you want to keep the temporary files.

4.6.12 IB Memory



Purpose — Check various Memory statuses.

Fields

Type — Memory check type.
Choose one from the list:

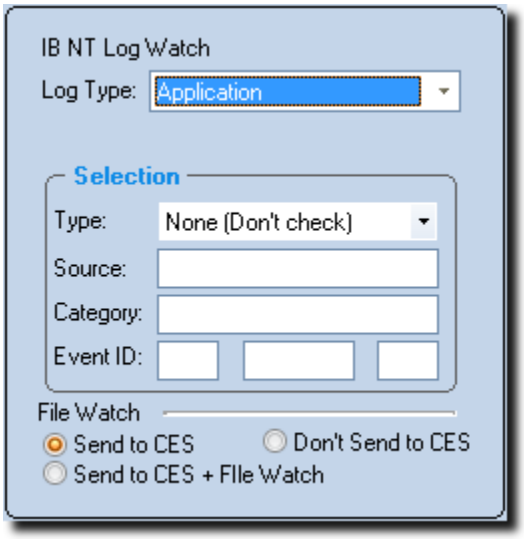
0 - memory utilization 0-100%
1 - Total size, in bytes, of physical memory.
2 - Size, in bytes, of physical memory available.
3 - Total possible size, in bytes, of the paging file.
4 - Size, in bytes, of space available in the paging file.
5 - Total size, in bytes, of the user mode portion of the virtual address space of the calling process.
6 - Size, in bytes, of unreserved and uncommitted memory in the user mode portion of the virtual address space of the calling process.

Details — The result of the check returns as follow:
$$RC : 0-Operation failed, 1-Operation succeed.
$$VALUE : If operation succeeded the result of the check.

Example

```
Memory      Memory utilization
IF          $$VALUE > 80
THEN
Message     Warning: Memory reached 80%
THEN-END
```

4.6.13 IB NT Log Watch



Purpose — Monitor one of the NT Log files.

Fields

Type — Message to send.
Choose Log file from the list:

User Event File	You Enter the file name
Application	
Security	
System	
Directory Service	
DNS Server	
File Replication Service	

Case — Whether the search is sensitive to upper-case or lower-case letters.

Type — Search only logs of this type for the above string. Possible types are: **None** (Don't Check), **Error**, **Warning**, **Information**, **Failure** and **Success**.

Source — Search for a specific Source from the header

Category — Search for a specific Category

Event ID — Search for a specific Event ID.
You can specify up to three Event IDs in a single request.

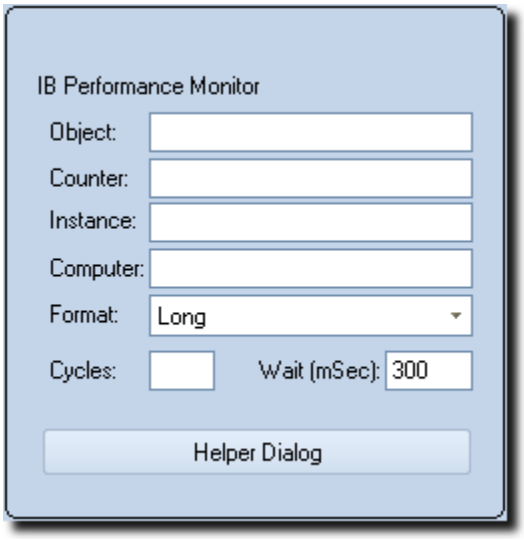
Details — The command instructs the RES (smart agent) to monitor a specific NT Log file.

As a result, every record written to the monitored NT Log file is automatically sent also to the Event24x7 rule system. Besides displaying the record at the Session Terminal console and the Focal Point, it is also passed through the Event24x7 rule system.

Important

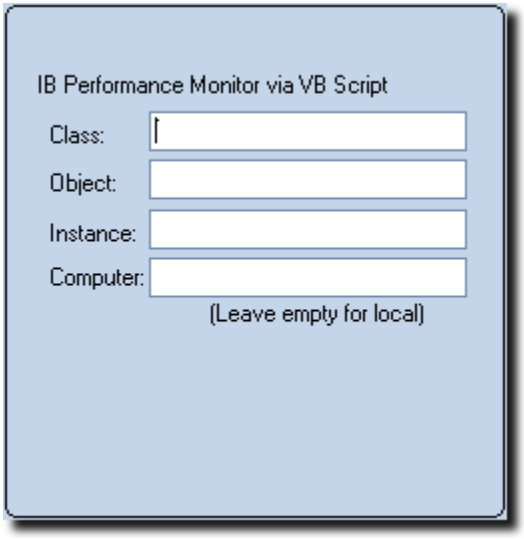
In cases where single selection is not enough you can define multiple IB NT Log Watch statements with different selection.

4.6.14 IB Performance Monitor



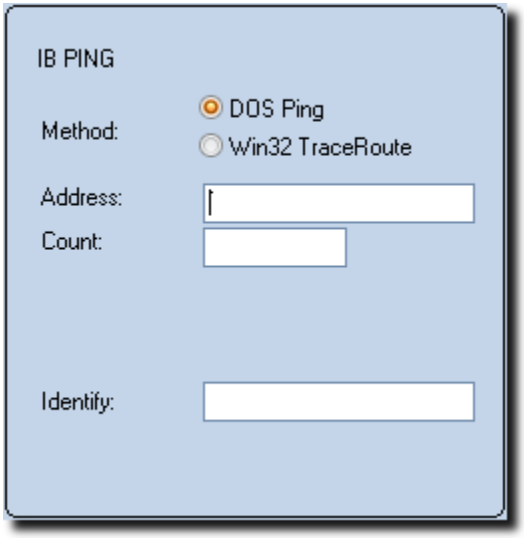
Purpose	Retrieves values from the Windows Performance Monitor.	
Fields	**Object** **Counter** **Instance**	Performance monitor variable. For the correct value open the performance monitor and take the values from there.
	Computer	Computer name when required remote value. For local computer leave it blank.
	Cycles	Number of times to perform rechecks in order to ensure that the result is as precise as possible.
	Wait	Time to wait in milliseconds after each check before conducting a recheck.
Details	Retrieves performance Monitor values. Has similar values as the ones you get by running the Windows Performance monitor. Type **perfmon** from the command line. You can press the **Helper Dialog** button too to assist you in selecting the exact checks to perform from the perfMon.	

4.6.15 IB Performance VB Script



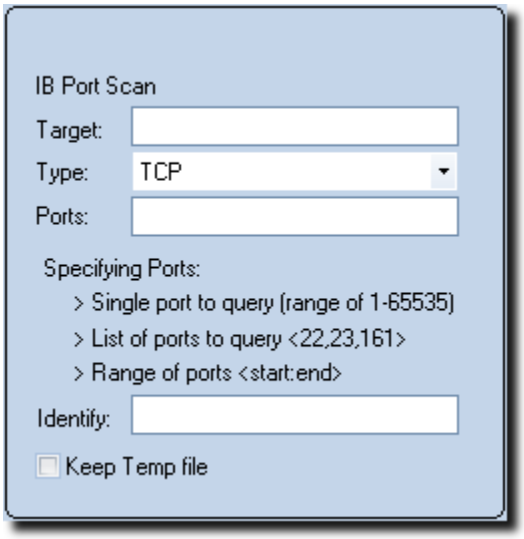
Purpose	Retrieves values from the Windows Performance Monitor via VB Script.	
Fields	**Class**	Class Name
	Object	Performance monitor variable. For the correct value open the performance monitor and take the values from there.
	Instance	Instance Name
	Computer	Computer name when required remote value. For local computer leave it blank.
Details	Retrieves performance Monitor values via VB script. Has similar values as the ones you get by running the Windows Performance monitor. Type **perfmon** from the command line.	

4.6.16 IB Ping



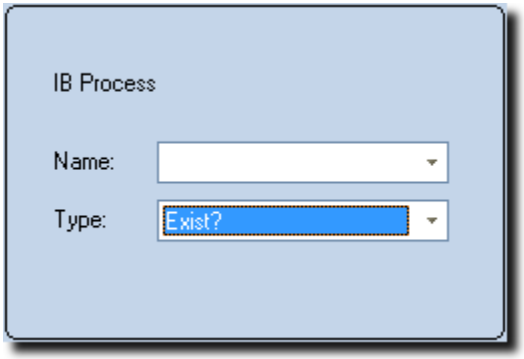
Purpose	Perform ping or traceroute from remote server.	
Fields	**Method**	Select DOS Ping or Win32 TraceRoute
	Address	Ping / TraceRoute address
	Count	Number of retries if failed
	Identify	Identify string to intercept the result at the Exception pane.
Details	Perform Ping or TraceRoute from remote server.	

4.6.17 IB Port Scan



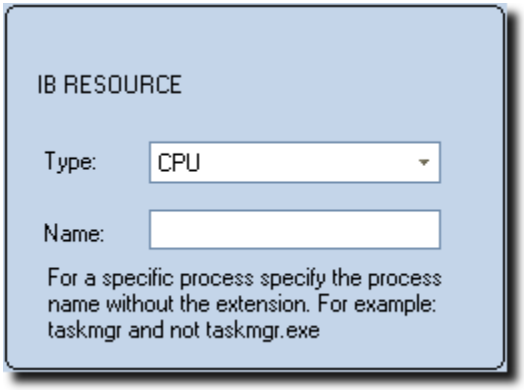
Purpose	Perform port scan.		
Fields	**Target**	Address (Name or IP) of target	
	Type	Object type. Available options: **TCP** **UDP** **Both**	
	Ports	Specifying ports: Single port to query (range 1-65535) List of ports to query <22,23,161> Range of ports <start:end>	
	Identify	Identify string to intercept the result at the Exception pane.	
Details	Perform ports scan using TCP, UDP or both methods.		

4.6.18 IB Process



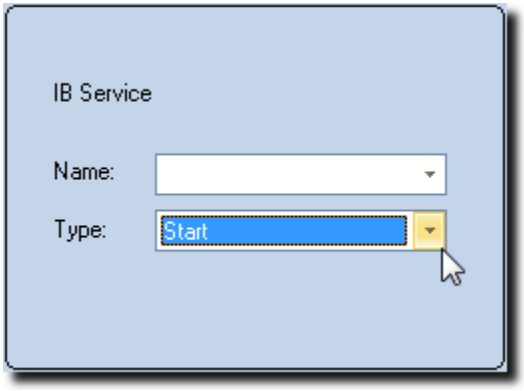
Purpose	Check Existence, Stop process or Create a new one.	
Fields	**Name**	Process Name. Expanding the combo box will bring the processes currently running on the desired RES. Choose one of them.
	Type	Type of activity: **Exist?** **Terminate** **Create**

4.6.19 IB Resources


IB RESOURCE
Type:
CPU
Name:
For a specific process specify the process name without the extension. For example: taskmgr and not taskmgr.exe

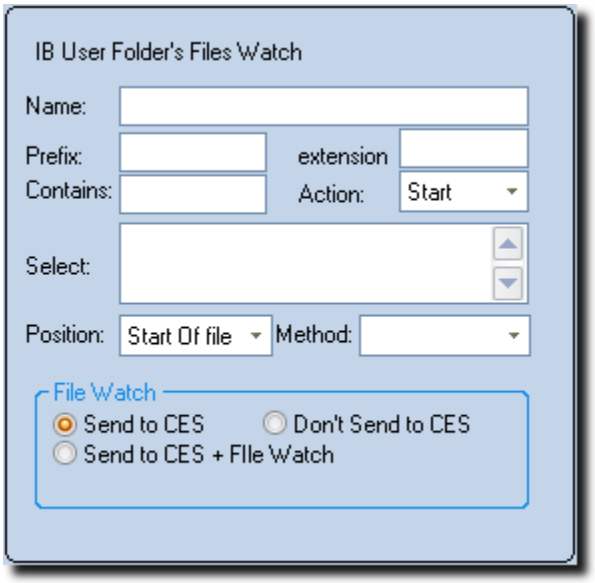
Purpose	Check various NT resources.		
Fields	**Name**	Resource name. If remains Empty, return the Total value for the entire computer.	
	Type	Chose type from a list: **CPU** **Memory** **Handles** **Threads Count**	
Details	Retrieve resources via performance Monitor.		

4.6.20 IB Service



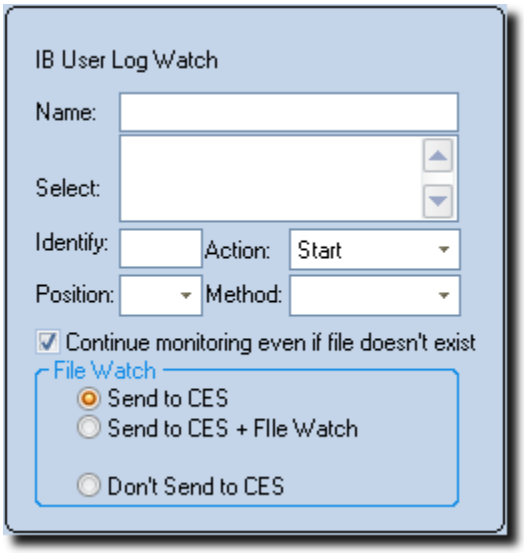
Purpose	Handle Service activity.	
Fields	**Name**	Service name. Opening the combo box will bring the services currently running. Choose one of them.
	Type	Chose type from list: **Start** **Stop** **Status** **Restart**

4.6.21 IB User Folder Watch



Purpose	Perform User Folder's Files Watch. Send new file records to Rule system and Focal Point.	
Fields	**Name**	Folder's full path
	Prefix	File's prefix name. Report on files for which this Prefix is part of their name.
	Contains	This is an optional field.
	Extension	File Extension. Report on files with this extension only.
	Action	Start or Stop the file watch activity
	Position	When starting the File watch, from where to start reporting: **Start of File** or **End of File**.
	Method	How to perform the File watch internally.
	File Watch	Should this file be part of the File Watch facility?

4.6.22 IB User Log Watch

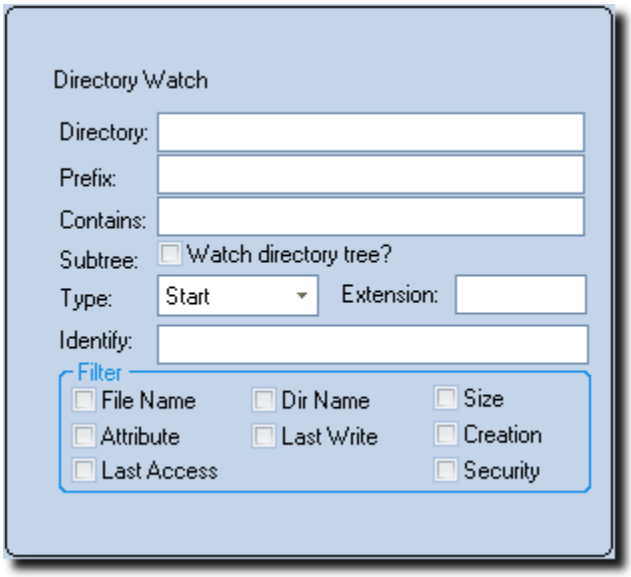


Purpose	Perform User Log Watch. Send new file records to Rule system and Focal Point.	
Fields	**Name**	File full name and path
	Select	
	Identify	Identify the string that will be sent to the Focal Point whenever a new file record is inserted into the specified log.
	Action	Start or Stop the file watch activity
	Position	When starting the File watch, from where to start reporting: **Start of File** or **End of File**.
	Method	How to perform the File watch internally.
	File Watch	Should this file be part of the File Watch facility?

4.6.23 IB WMI Command

Purpose	Perform a WMI command on the local RES.	
Fields	**Command**	The command to perform.
	Identify	Identify string to intercept the result at the Exception pane.

4.6.24 Directory Watch



Purpose — Directory Watch Dog

Fields

Directory — Directory full path

Prefix — File's prefix name.
Report on files for which this Prefix is part of their name.
This is an optional field.

Contains

Subtree — Watch recursively on sub trees when set.

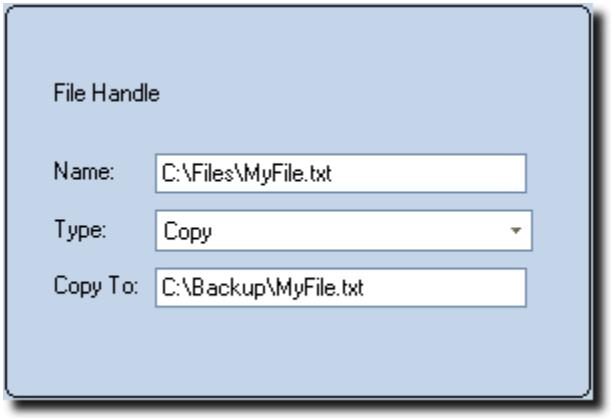
Type — Type of Action. Start or Stop Directory Watch Dog for this Directory.

Extension — File Extension. Report on files with this extension only.

Identify — Identify a string that will be sent to the Focal Point whenever a directory change is encountered.

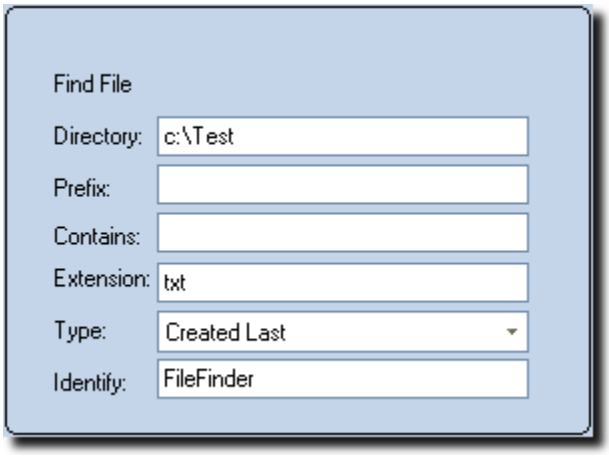
Filter — Specify the attributes for the monitored files in the directory.

4.6.25 File Handle



Purpose	Ability to Copy or Delete files on agent less sessions.	
Fields	**Name**	Source file full path.
	Copy To	Target path in case of Copy Operation.
	Type	File operation to Handle: **Delete** **Copy**
Details	The File Handle provides the ability to handle files remotely.	

4.6.26 File Find



Purpose	Find files with specific characteristics in a directory	
Fields	**Directory**	Directory full path
	Prefix	File's prefix name. Report on files which this Prefix is part of their name.
	Contains	This field is optional
	Type	File type to search for: **Smallest File** **Biggest File** **Created First** **Created Last**
	Identify	Identify string that will be sent to the Focal Point whenever a file is found

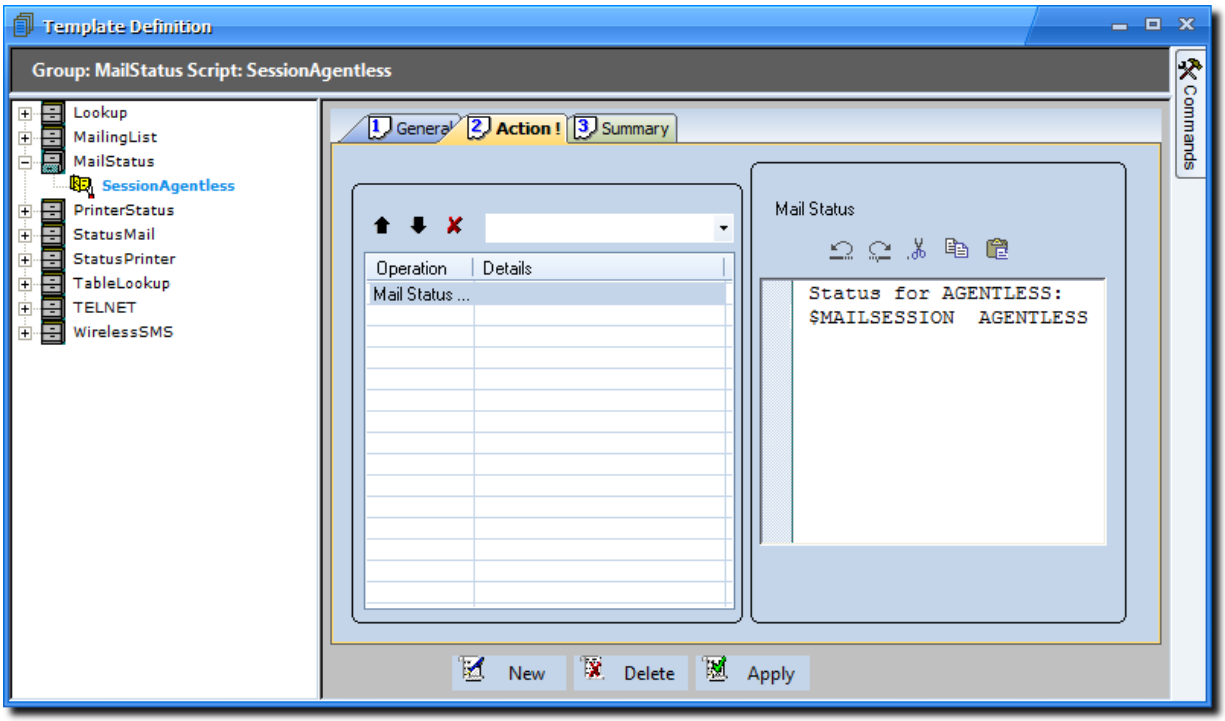
4.7 Templates Definition

The Template is a versatile Event24x7 tool that performs several activities:

- Automatic login to UNIX and LINUX sessions monitored by Event24x7.
- Table Lookup
- Mailing List
- Mail Status Data
- SMS Wireless
- Repository for Servers initial values.

The Template is a sub-group of Rules and IB definitions. Besides the General Tab it requires only the Action! Tab.

The **When?** tab is not required since the template is executed only during session startup.



Event24x7 synchronizes automatically the Templates entries with the DES server. As a result every DES has a copy of the templates.

The Template screen has two parts:

- **Template List**
  The Template List is located at the left side of the screen and is displayed in a tree structure. It contains the list of the all the defined Templates organized by groups, which are logical units of Templates sharing some mutual content.

- **Definitions Tabs**
  The Template definition tabs are at the right side of the screen.

Template screen operation buttons

New		Add new Template. It opens the definition tabs for entering a new Template.
Delete		Delete the selected Template.
Apply		Save last changes in the file.

4.7.1 Automatic Login

When Event24x7 connects to a session that requires login to gain authorization, the Template performs the login automatically. This eliminates the need for operator intervention to perform manual login each time the Event24x7's session is started.

The Template is executed when the monitored session's status becomes Active. During the Event24x7 startup process, it starts the all the defined sessions. If a defined session has a Login Template at Startup defined in the Session Advanced tab, the Template will automatically be executed after Event24x7 establishes connection with the session. The login Template is also executed when a session is restarted.

4.7.2 Table Lookup

Replace a numerical value from an incoming event with some textual meaning defined in tables. The table lookup mechanism uses two commands:
Table Lookup and Table Lookup Default. Any other command is ignored.

For example, if we receive a SNMP Trap that contains a numerical error value and we have to translate the value into string meaning in order to send it to another target.

Using the Table lookup is done by the Event24x7 function:
$$%LOOKUP < Template-Table-Name> <value>

4.7.3 Mail Status Data

Mail Status is a way to automatically get mails with the updated Parameter's status.
This part contains definition statements that defined the shape and the content of the mail.

There are five different line types you can use:

1. Free text. Can be combined with HTML tags for Example: Event24x7

2. Contain: $MAILPARAMETER <session name> <parameter name>
   The line will be replace by the value of the requested Parameter

3. Contain: $MAILMONITOR <session name> <monitor name>
   The line will replaced by all the Parameters of this Monitor

4. Contain: $MAILSESSION <session name>
   The line will replaced by all the Parameters of this Session.

5. Contain: $MAILDES
   The line will replaced by all the Parameters of this DES.

4.7.4 Printer Status Data

Printer Status is a way to automatically get mails with the printer's counters.

There are five different line types you can use:

1. Free text. Can be combined with HTML tags for Example: Event24x7

2. Contain: $PRINTERSESSION <session name>
   The line will be replace by the value of the requested printer.

3. Contain: $PRINTERDES
   The line will be replace by the value of the all printers for the specified DES

4.7.5 Mailing List

When Event24x7 intercepts a problem, one of the action items is to send a notification email. In some occasion the target of the email should be group of people. One solution is to define Group mailbox and to send the email to the group. Every member of the group will get the email. Another solution handles by Event24x7 with its internal mailing list ability.

When defining Action! Mail you can choose the Mailing list option and provide a Template name for the mailing list.

The Mailing List mechanism uses a single command: Mailing List.

When executed, every entry with Action! Mailing list command will get the email.

4.7.6 SMS Wireless

Sending SMS Wireless requires sending a command according to a specific protocol.
The Template defines the actions according to the protocol.

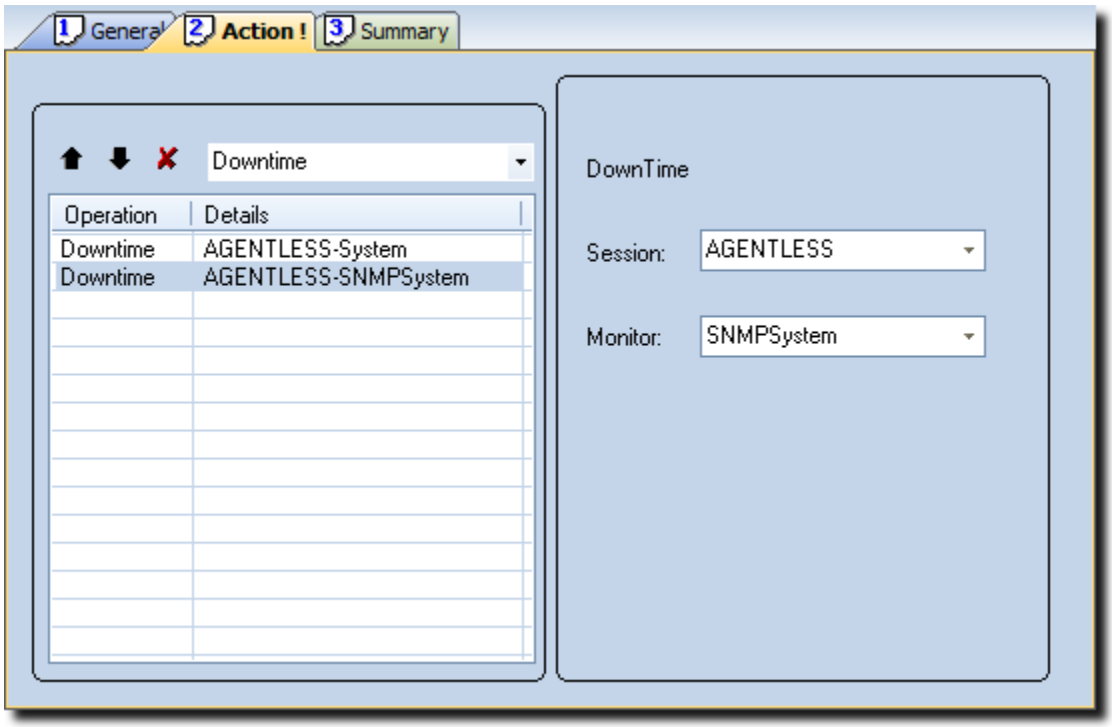
4.7.7 Repository

When a DES server becomes active, CES synchronizes the Template content with the DES. The comparison is done with a checksum. Every Template that is not up to date will be sent to the DES. This mechanism might save a lot of effort when deploying an Event24x7 installation.

For example, in cases where Event24x7 intercepts User log files and the log names have a fixed suffix but the prefix (Drive and installation disk) is different from site to site. When defining the Log file name with the User variable ($$2LOGPATH\prog2\madata.log), the user variable should be changed only once.

4.7.8 Downtime

When a Downtime for sessions and monitors is required, it is possible to create a Downtime Script Group with a unique name that will hold the lists of the sessions and monitors. This way each time that the same group of sessions and monitors is required for downtime operation it can be used easily by stating its name in the Downtime Monitors tab, when the 'From External File' box is checked.



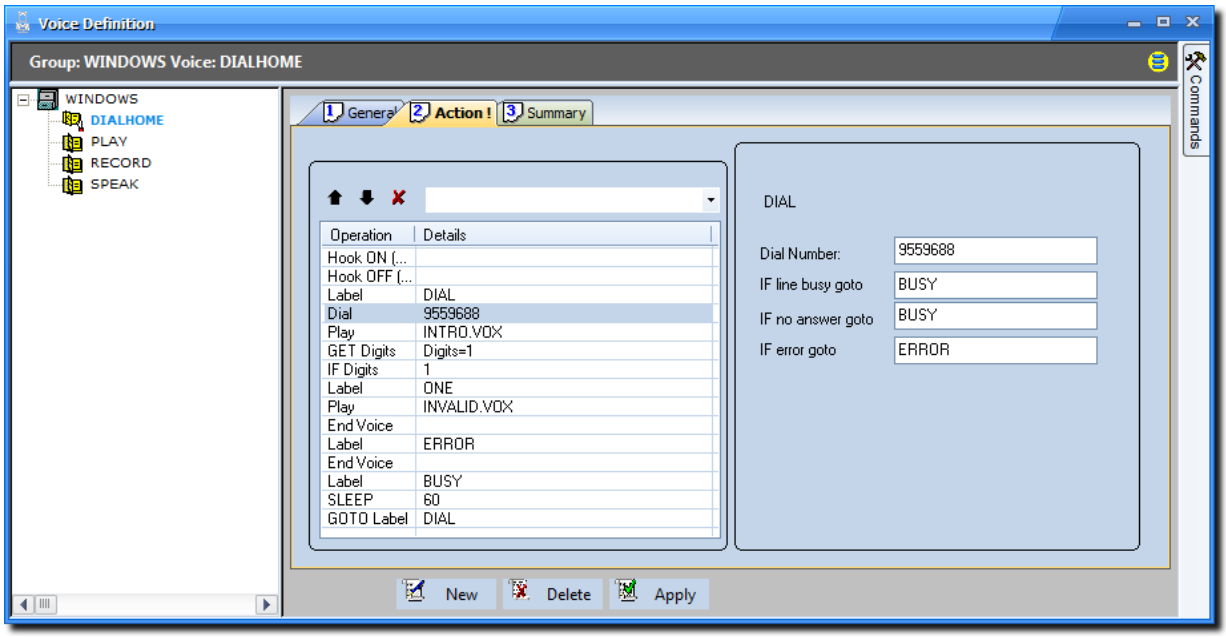
Purpose	Select Sessions and Monitors for Downtime.	
Fields	**Session**	Session name.
	Monitor	Monitor name.

4.8 Voice definition

Voice Definition allows defining voice actions to be executed at the EventVoice Server.

Voice actions use a Dialogic voice board to perform computer-to-human phone conversion. It allows, for example, automatic dialing to the system programmer's cellular phone, telling him the error message and asking him what to do next. The person can choose a response dynamically by typing the phone keypad. Typing "1" to let Event24x7 run a condense job, and "2" to re-boot the computer.

The voice definition simulates a human having a phone conversion.



The Voice screen has two parts:

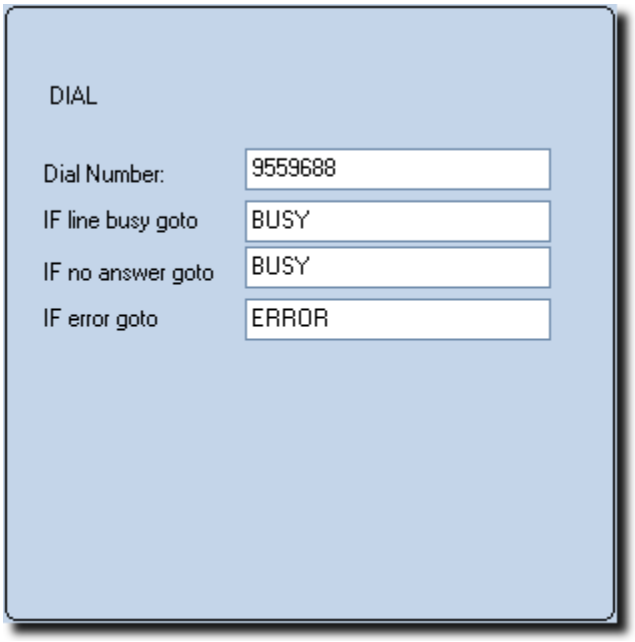
- **Voice List**
  The Voice List is located at the left side of the screen and is displayed in a tree structure. It contains the list of the all the defined Voice organized by groups, which are logical units of Voice sharing some mutual content.

- **Definitions Tabs**
  The Voice definition tabs are at the right side of the screen.

Voice screen operation buttons

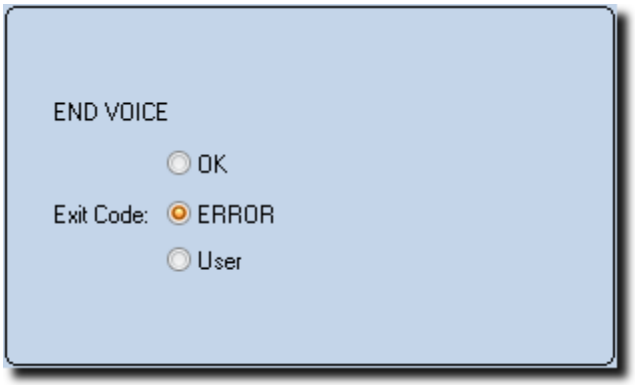
New		Add new Voice. It opens the definition tabs for entering a new Voice entry.
Delete		Delete the selected Voice entry.
Apply		Save last changes in the file.

4.8.1 Dial



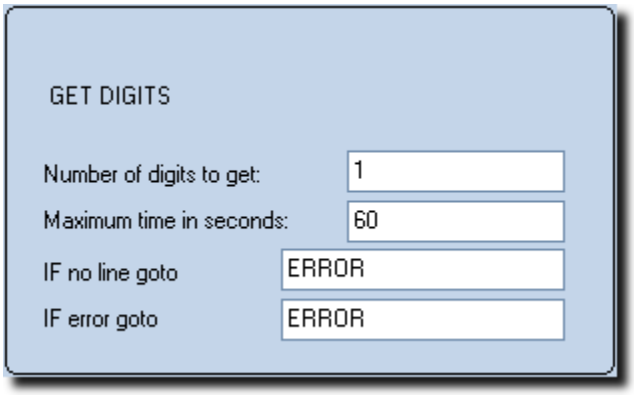
Purpose	Dial a number	
Fields	**Dial Number**	The phone number requested for dialing
	If line busy goto	Action to be taken when line is busy
	If no answer goto	Action to be taken when there is no answer.
	If error goto	Action to be taken in case of error.
Details	Dial operation dials a number. User may define the action to be taken in case the line is busy or there is no answer or in case of error.	
Example	**Dial Number** 9786789 **IF line busy goto** Busy **IF no answer goto** Busy **IF error go to** Error	

4.8.2 End Voice



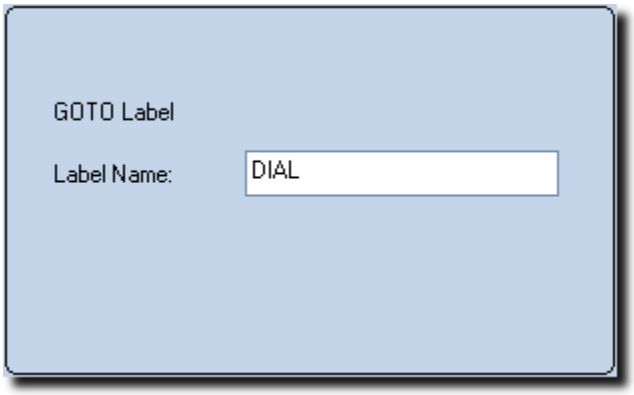
Purpose	End script with exit code.	
Fields	**Exit Code**	Radio button to signal return code. Use User to set your own return code. Setting return code enable you to set some action on CES or DES.
Details	End voice script with return code.	
Example	**Exit Code** OK	

4.8.3 Get Digits



Purpose	Get input from the caller. Allow the Voice script to ask the caller how to proceed. The caller types the answer with the telephone keypad.	
Fields	**Number of digits to get**	
	Maximum time in seconds	Seconds to wait for action completion.
	If no line go to	Label name
	If error go to	Label name
Details		
Example	**Number of digits to get**	**1**
	Maximum time in seconds	**60**
	If no line go to	**ERROR**
	If error go to	**ERROR**

4.8.4 GOTO label



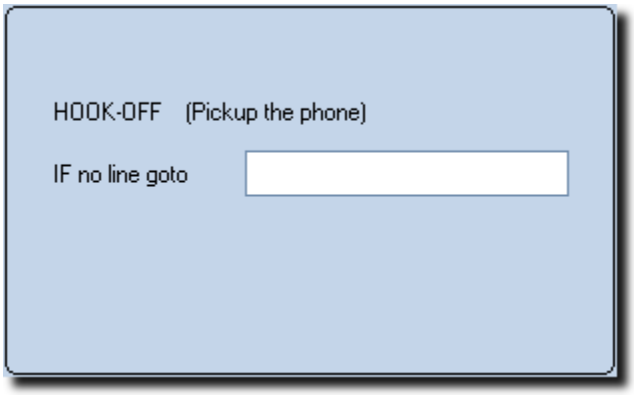
Purpose In a script jump to a label

Fields **Label Name** Name of the label

Details Jump to labeled section in script.

Example **GOTO label** retry

4.8.5 Hook Off



Purpose Pick up the phone.

Fields **If no line goto** Label name.

Details Pick up the phone to get a line signal.
This is the action to be taken before dialing a number.

Example **Hook Off**

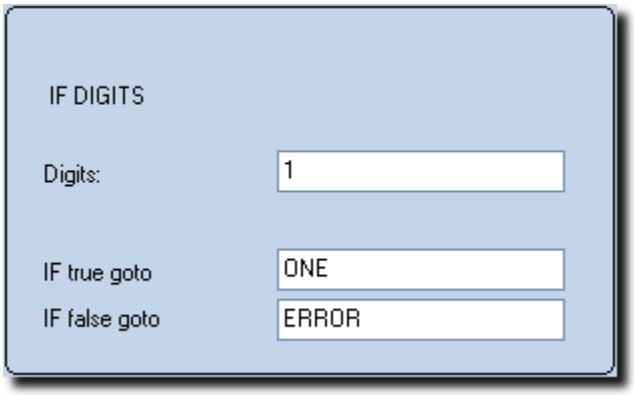
If no line goto retry_label

4.8.6 Hook On

Purpose Put the phone in its cradle.

Details End of voice conversation
Example **Hook On**

4.8.7 If Digits



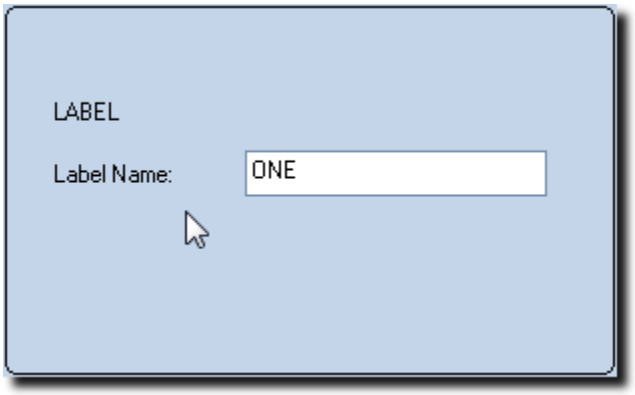
Purpose Check the input that was provided by the caller.
The Voice script continues conditionally according to the input.

Fields		
	Digits	Digit numbers entered by the caller
	If true go to	Label name
	If false go to	Label name

Details
Example

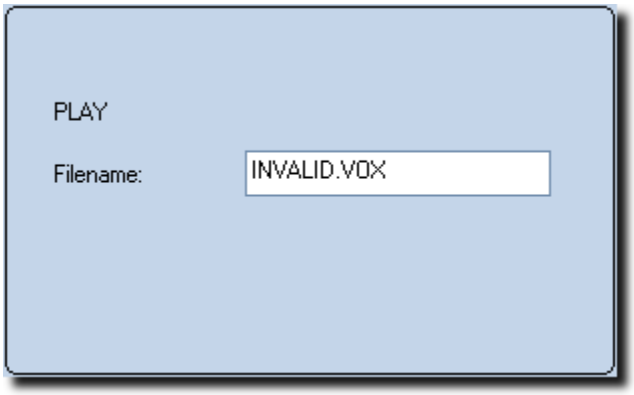
Digits	**1**
If true goto	**ONE**
If false goto	**ERROR**

4.8.8 Label



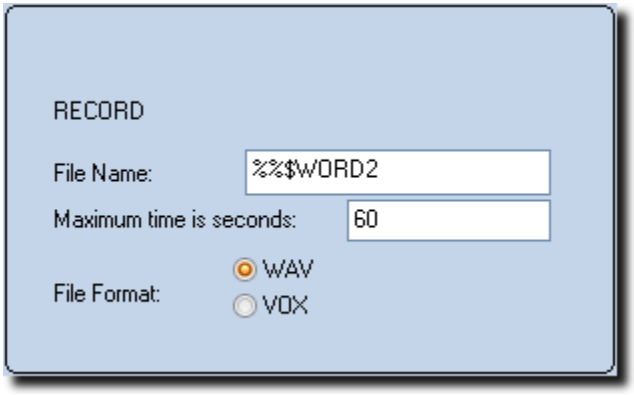
Purpose	Script label	
Fields	**Label Name**	Label name
Details	Script label to define a script section. May be used in conjunction with GOTO label action.	

4.8.9 Play



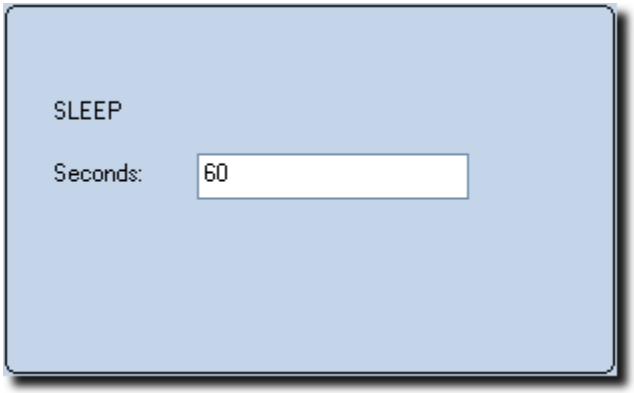
Purpose	Play a voice file	
Fields	**File Name**	Name of wav or vox file to be played.
Details		
Example	**Play** announcement.wav	

4.8.10 Record



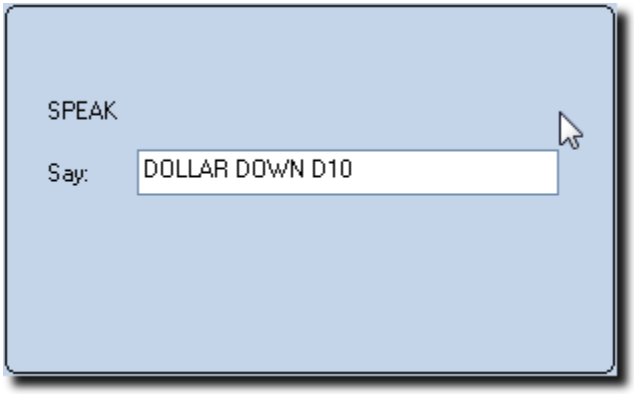
Purpose	Record a voice file.	
Fields	**File Name**	File to be recorded.
	Maximum time	Maximum time in seconds allowed for recording
	File Format	A radio button: either wav or vox.
Details		
Example	**Record** special_announcment.wav **Maximum time:** 60 **File Format:** wav	

4.8.11 Sleep



Purpose	Pause time in seconds.	
Fields	**Seconds**	Number of seconds to sleep.
Details		
Example	**Sleep** 60	

4.8.12 **Speak**

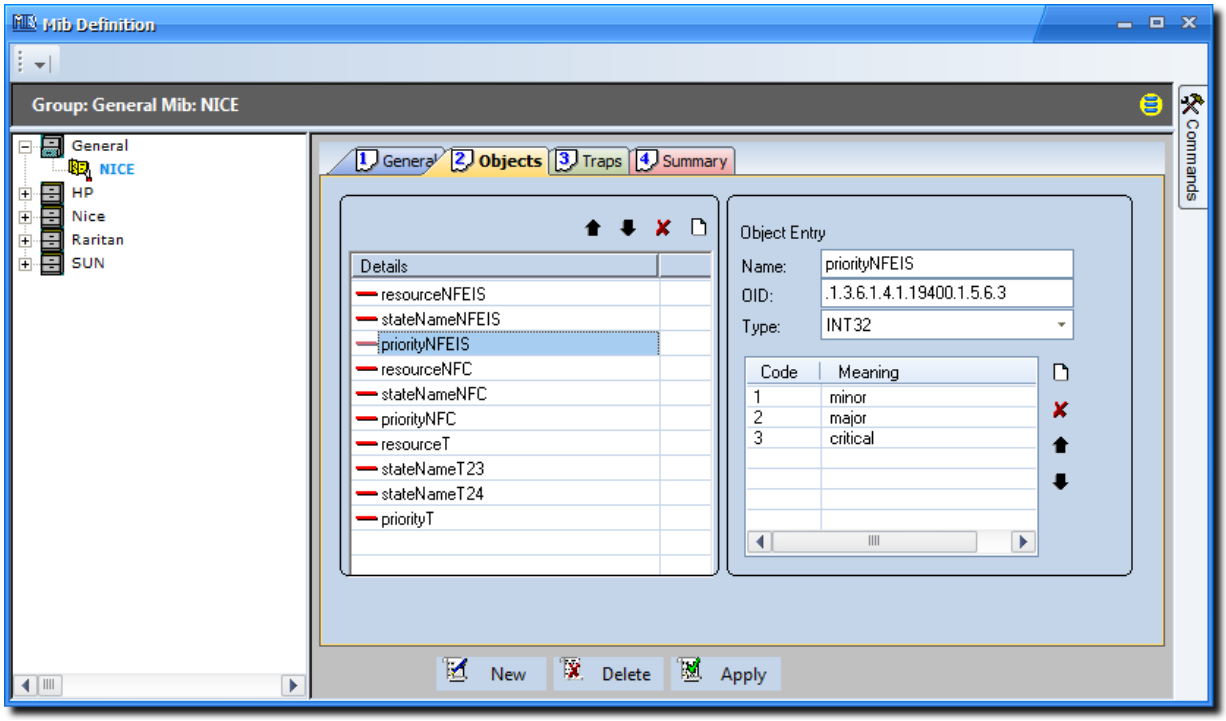


Purpose	Text to be read out (spoken)
Fields	**Say** Text
Details	Reads a written text out load.
Example	**Say** Good Morning

4.9 MIB definition

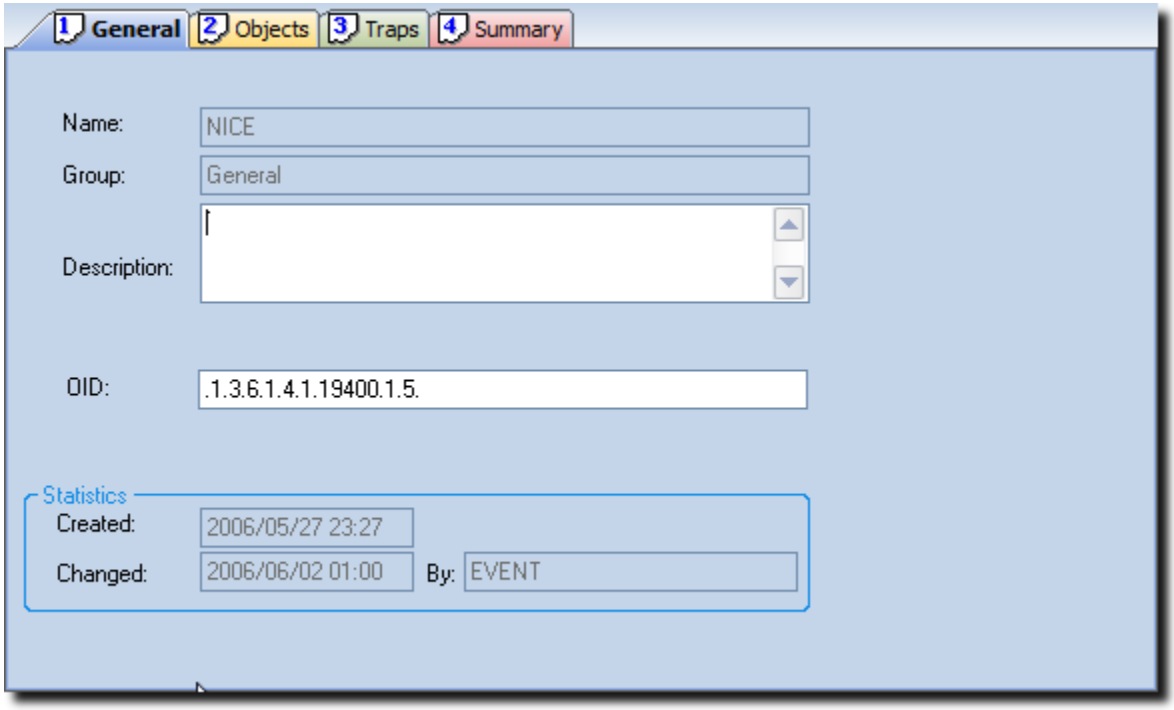
MIB Definition allows defining a SNMP MIB structure.

Event24x7 is capable of getting SNMP traps in general and SNMP MIB traps in particular.
A MIB Trap packet contains series of numbers that represent content. The MIB structure is the dictionary that helps translate the number into meaningful text. Event24x7 MIB contains the MIB important part for translating the trap: Object and Trap definitions.
When a MIB trap arrives and Event24x7 MIB is defined for the MIB, Event24x7 will display the meaning of the trap with a number.



Activating the MIB trap is done at the SNMP session definition.

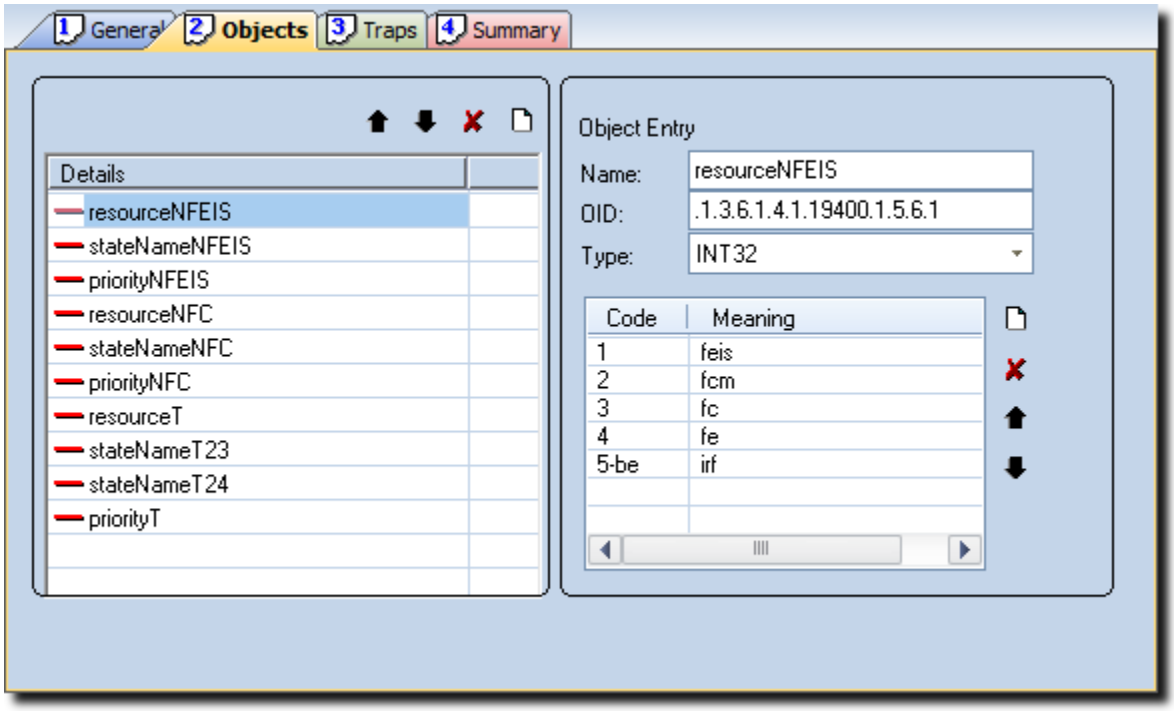
4.9.1 General Tab



Purpose	Define the MIB name and the Trap Object Identifier.	
Fields	**Name**	Event24x7 MIB Trap name
	Group	Object Identifier
	Description	Optional Trap description
	OID	Object Identifier of the expected trap. This is the Trap key. Every MIB trap has a unique number.

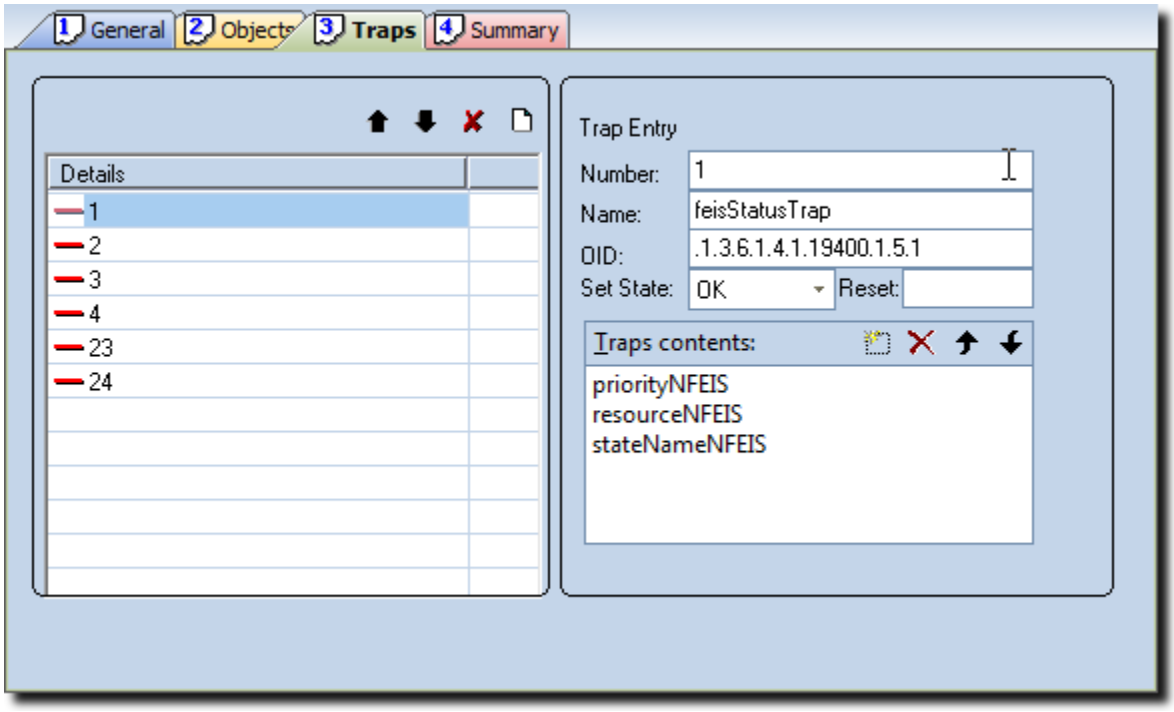
Details

4.9.2 Object



Purpose	Define the MIB object	
Fields	**Name**	Object name
	OID	Object Identifier
	Type	The Object's type
	table	If the object is a numeric value that represents an enumerated list of values, define the possible value for this Object.
Details	Define the MIB elements that exist in the MIB.	

4.9.3 Traps

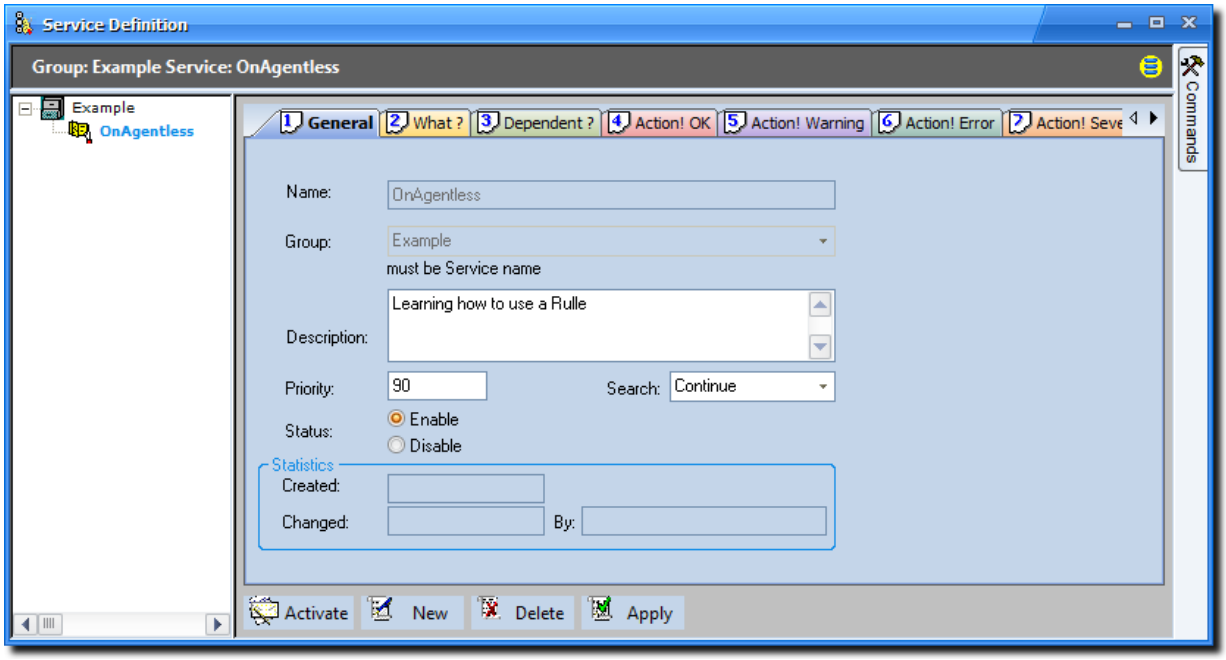


Purpose	Define MIB Traps	
Fields	**Number**	Trap number
	Name	Trap name
	OID	Trap Object Identifier
	Set State	When using "**PRM SNMP Auto Creating**" set the state of this trap at the Dashboard.
	Reset	When using "**PRM SNMP Auto Creating**" specify which trap entry to set state.
	Trap contents	List of objects that are a part of the trap.
Details	A MIB can have several traps. Each trap consists of several Objects.	

4.10 Service definition

Define actions to be executed when the state of the service changes.

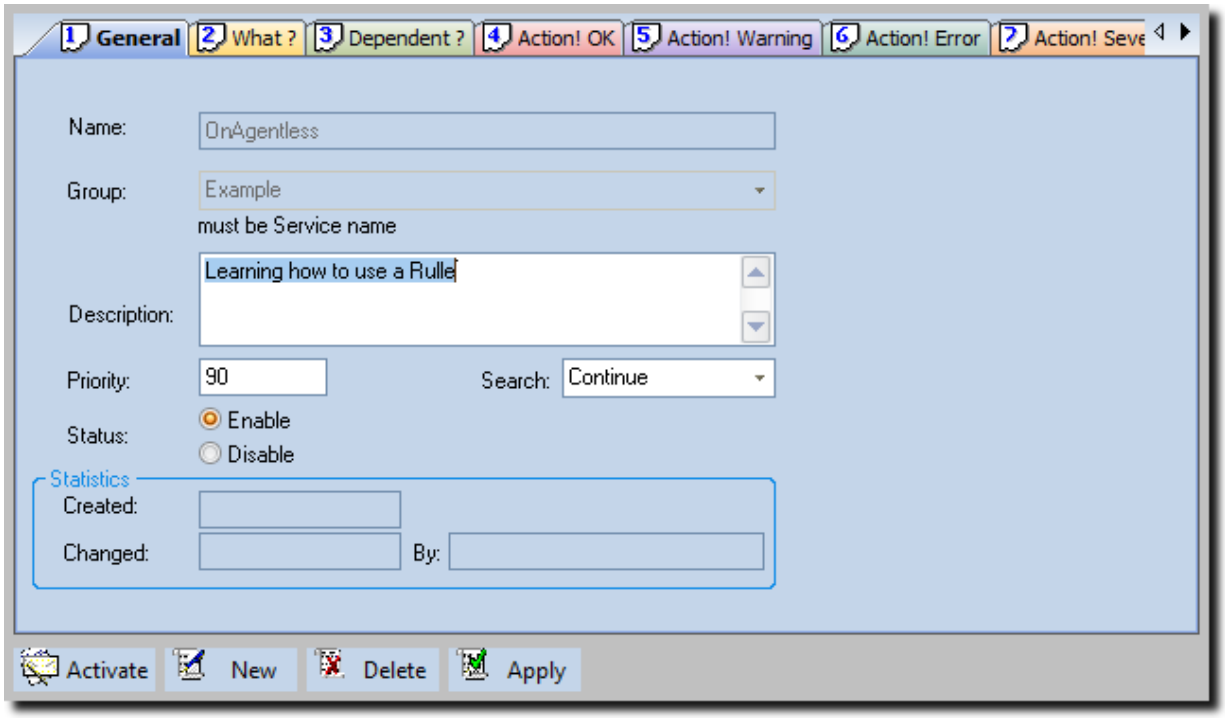
This is part of the Service Level Management of Event24x7.



Important:

Group name must be the name of an existing Service.
The connection between the rule and the service is done according to the Group name.

4.10.1 General Tab

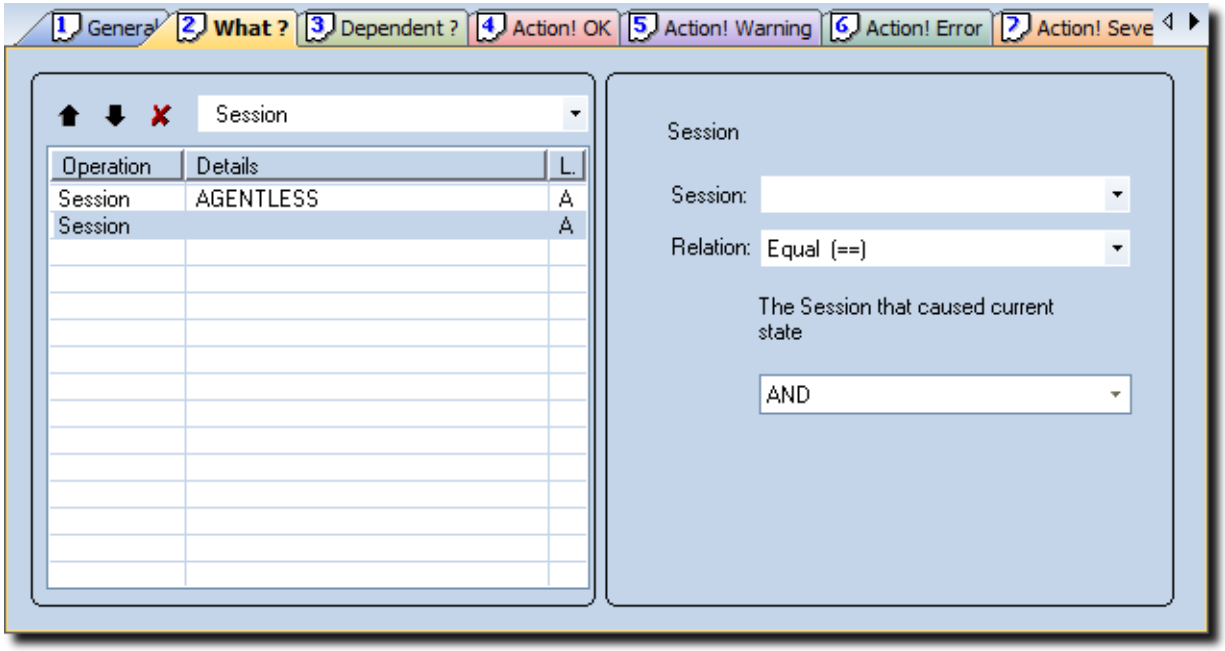


Name	Event24x7 Service Rule name
Group	Must be an existing Service Name.
Description	Optional description
Priority	Rule priority from 0-lowest to 100-highest. When several rules are triggered by an incoming message they are executed according to their priorities, from the highest to the lowest.
Search	How to continue the search for other rules to be triggered after the first one is triggered. Available options: **Stop On First** – After the first rule is triggered, stop the search. Do not search for other rules. **Stop On Priority** – Stop the search after checking for rules with the same priority as the triggered one. **Continue** – Continue searching for other rules.
Created **Changed**	Creation date of the rule. Date of last change.

By	Name of the user who made the last change.

4.10.2 What Tab

The What? tab is used to define operations that trigger a rule.



"What?" consists of one or more operations with an AND/OR/NOT relationship. A Rule is triggered if the operations criteria of the "What?" are met.

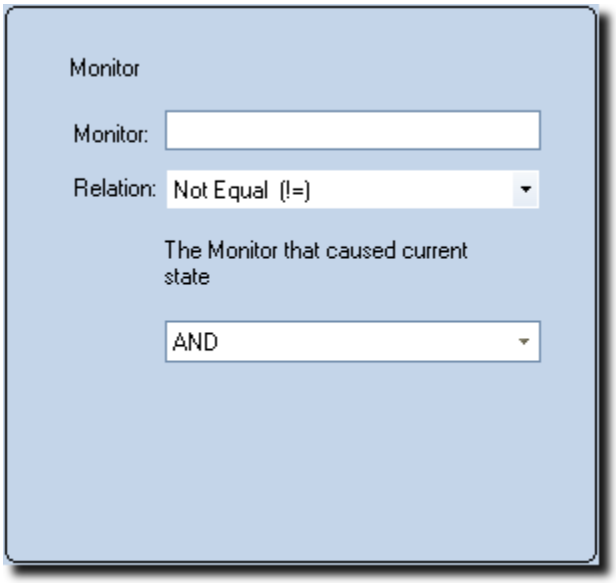
Available operations:

Monitor	Action based on the Monitor.
Parameter	Action based on the Parameter.
Session	Action based on the Session.
Service	Action based on the Service itself.

To add an operation, choose from the pull down combobox: Monitor, Parameter or Session. The window on the right hand side will change according to your selection.

Press the button to delete the selected operation.
Press the buttons to move the selected operation up or down.

4.10.2.1 Monitor Parameter



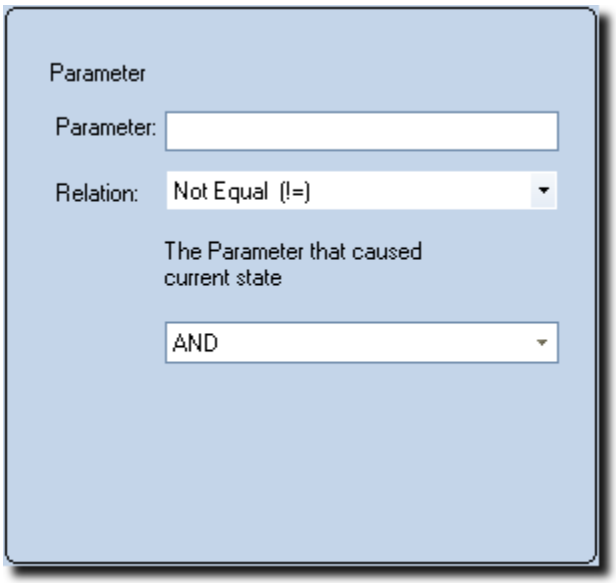
Purpose — Perform action based upon the Monitor that caused the Service state to change.

Fields

Monitor — Monitor name that causes the state change

Relation — Equal or Not-Equal the Monitor name.

4.10.2.2 Parameter



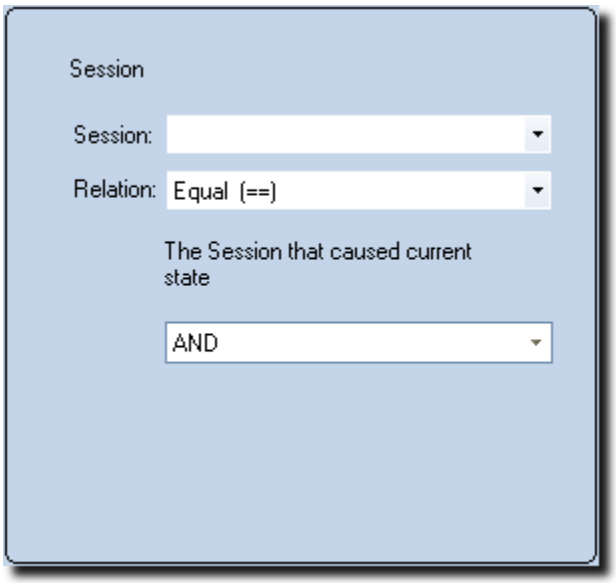
Purpose — Perform action based upon the Parameter that caused the Service state to change.

Fields

Parameter — Parameter name that caused the state change

Relation — Equal or Not-Equal the Monitor name.

4.10.2.3 Session



Purpose — Perform action based upon the Session that caused the Service state to change.

Fields

Session — Session name that causes the state change

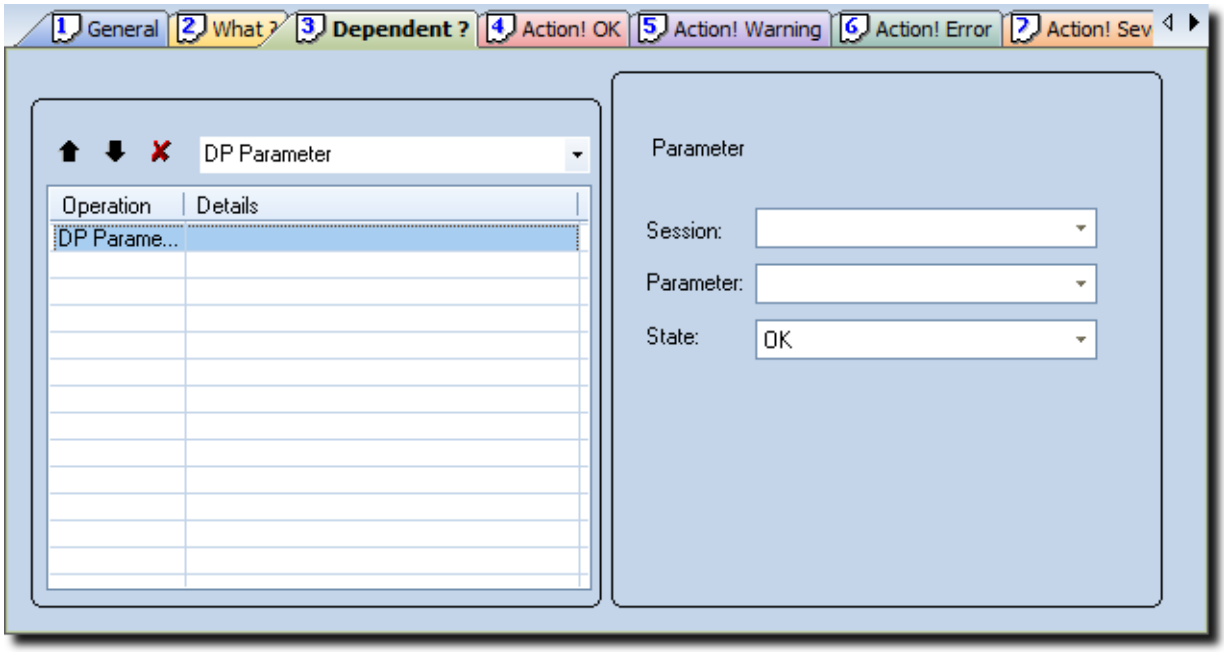
Relation — Equal or Not-Equal the Monitor name.

4.10.2.4 Service

Purpose Perform action when the Service state changed.

4.10.3 Dependent ?

Define the pre-requisite conditions for execution of this Rule service.



If conditions defined have failed to exist, the Rule will not execute at this cycle.

4.10.4 Action tabs

The action tabs are similar to the Rule and Parameter Action! tabs.
Please note that the Rule Service Action tabs are executed at the CES server.

5. Operations

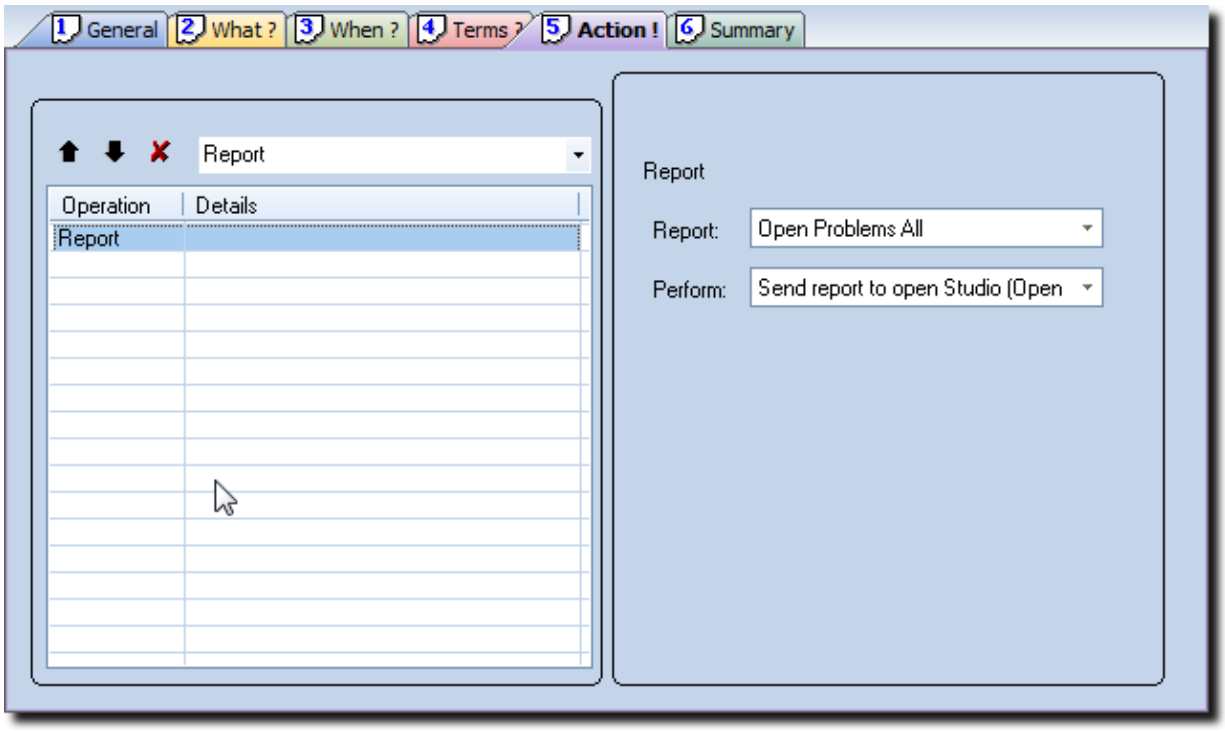
The Operations chapter covers the screens that operate Event24x7.

5.1 Reports

Pre-defined reports that display the result as a web page.
Available reports:

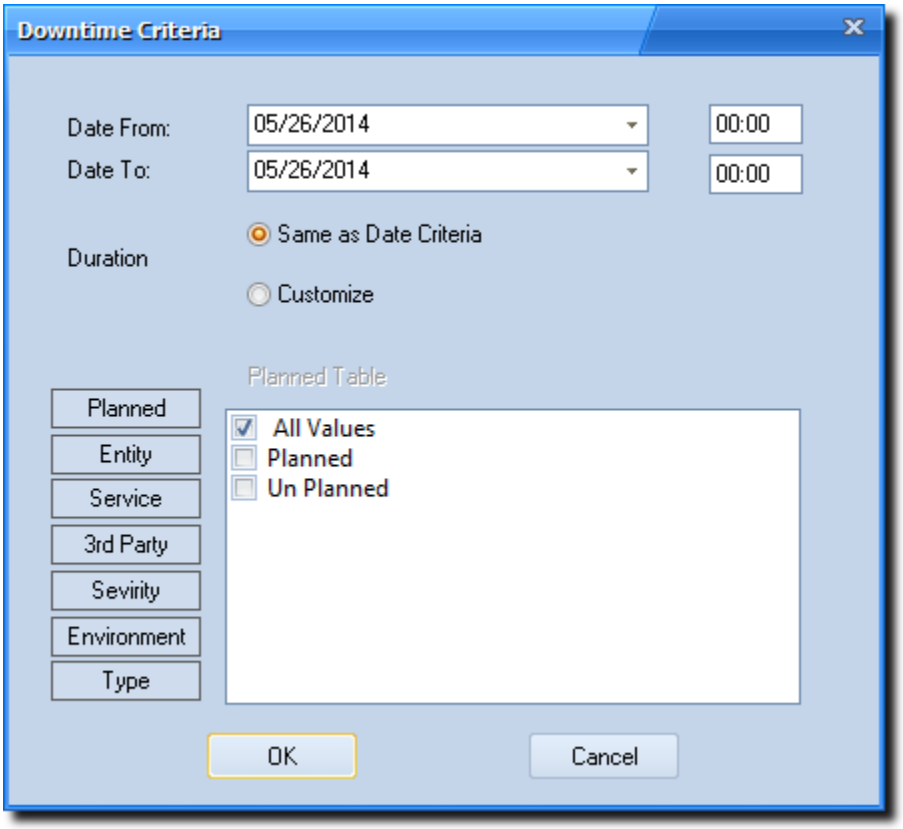
- Open Problems (Group by Sessions) Report.
- Open Problems All Report.
- Services state Details.
- List of Parameters that use Exceptions.
- List of Event24x7 Pro-Active activities.
- List of CES execution threads.
- List of DES execution threads.
- Downtime.

Note: An important feature has been added for the Report's option which is to auto-refresh the Open Problem's types. This can be done via the Rules Definitions by defining a new **rule** of type **event** which will be executed every cyclic interval (say 5 minutes) and is responsible to auto-refresh the displayed open problem's report web page. The action tab of this rule should be set as seen below:



Don't forget to select one of the first two options specified on the page above (in **Event24x7** under **Operation->Reports List**) before activating this rule.

5.1.1 Downtime



Purpose — Create a report of Downtime Events.

Fields

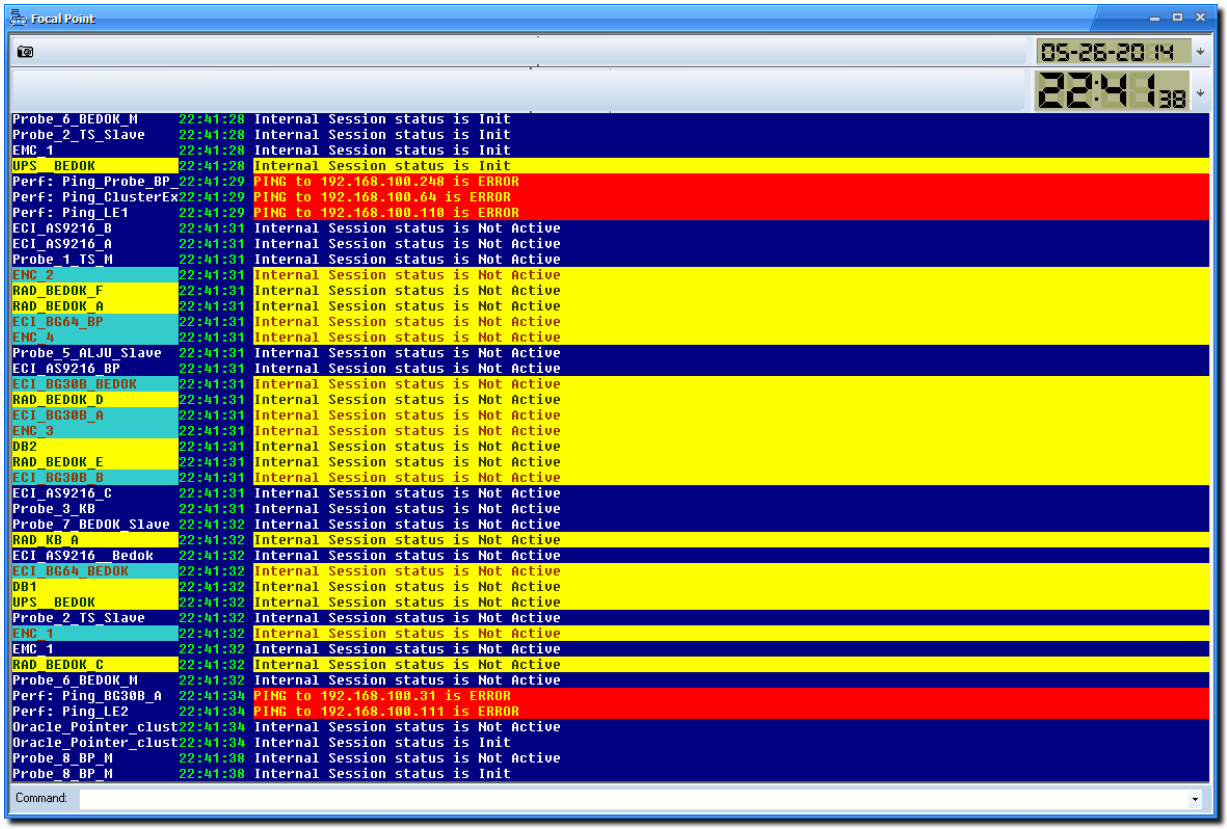
Date From — Start date and time.

Date To — End date and time.

Select Table — Select table from:
Planned, Entity, Service, 3rd Party, Severity, Environment, Type.
In each table select and check the values to display.

5.2 Focal Point

Focal Point provides a single place to monitor, control, and handle exceptions automatically for computers and resources that are critical to the organization. Focal Point shows messages and commands, and states their sources. The user may enter commands from the Focal Point Command line. Messages coming from a monitored session are displayed on the Terminal assigned to the session, and also sent to the Focal Point. Focal Point is actually a master console of all consoles.


Focal Point
05-26-20 14
22:41:38
Probe_6_BEDOK_M 22:41:28 Internal Session status is Init
Probe_2_TS_Slave 22:41:28 Internal Session status is Init
EMC_1 22:41:28 Internal Session status is Init
UPS__BEDOK 22:41:28 Internal Session status is Init
Perf: Ping_Probe_BP_ 22:41:29 PING to 192.168.100.248 is ERROR
Perf: Ping_ClusterEx 22:41:29 PING to 192.168.100.64 is ERROR
Perf: Ping_LE1 22:41:29 PING to 192.168.100.110 is ERROR
ECI_AS9216_B 22:41:31 Internal Session status is Not Active
ECI_AS9216_A 22:41:31 Internal Session status is Not Active
Probe_1_TS_M 22:41:31 Internal Session status is Not Active
ENC_2 22:41:31 Internal Session status is Not Active
RAD_BEDOK_F 22:41:31 Internal Session status is Not Active
RAD_BEDOK_A 22:41:31 Internal Session status is Not Active
ECI_BG64_BP 22:41:31 Internal Session status is Not Active
ENC_4 22:41:31 Internal Session status is Not Active
Probe_5_ALJU_Slave 22:41:31 Internal Session status is Not Active
ECI_AS9216_BP 22:41:31 Internal Session status is Not Active
ECI_BG30B_BEDOK 22:41:31 Internal Session status is Not Active
RAD_BEDOK_D 22:41:31 Internal Session status is Not Active
ECI_BG30B_A 22:41:31 Internal Session status is Not Active
ENC_3 22:41:31 Internal Session status is Not Active
DB2 22:41:31 Internal Session status is Not Active
RAD_BEDOK_E 22:41:31 Internal Session status is Not Active
ECI_BG30B_B 22:41:31 Internal Session status is Not Active
ECI_AS9216_C 22:41:31 Internal Session status is Not Active
Probe_3_KB 22:41:31 Internal Session status is Not Active
Probe_7_BEDOK_Slave 22:41:32 Internal Session status is Not Active
RAD_KB_A 22:41:32 Internal Session status is Not Active
ECI_AS9216__Bedok 22:41:32 Internal Session status is Not Active
ECI_BG64_BEDOK 22:41:32 Internal Session status is Not Active
DB1 22:41:32 Internal Session status is Not Active
UPS__BEDOK 22:41:32 Internal Session status is Not Active
Probe_2_TS_Slave 22:41:32 Internal Session status is Not Active
ENC_1 22:41:32 Internal Session status is Not Active
EMC_1 22:41:32 Internal Session status is Not Active
RAD_BEDOK_C 22:41:32 Internal Session status is Not Active
Probe_6_BEDOK_M 22:41:32 Internal Session status is Not Active
Perf: Ping_BG30B_A 22:41:34 PING to 192.168.100.31 is ERROR
Perf: Ping_LE2 22:41:34 PING to 192.168.100.111 is ERROR
Oracle_Pointer_clust 22:41:34 Internal Session status is Not Active
Oracle_Pointer_clust 22:41:34 Internal Session status is Init
Probe_8_BP_M 22:41:38 Internal Session status is Not Active
Probe_8_BP_M 22:41:38 Internal Session status is Init
Command:

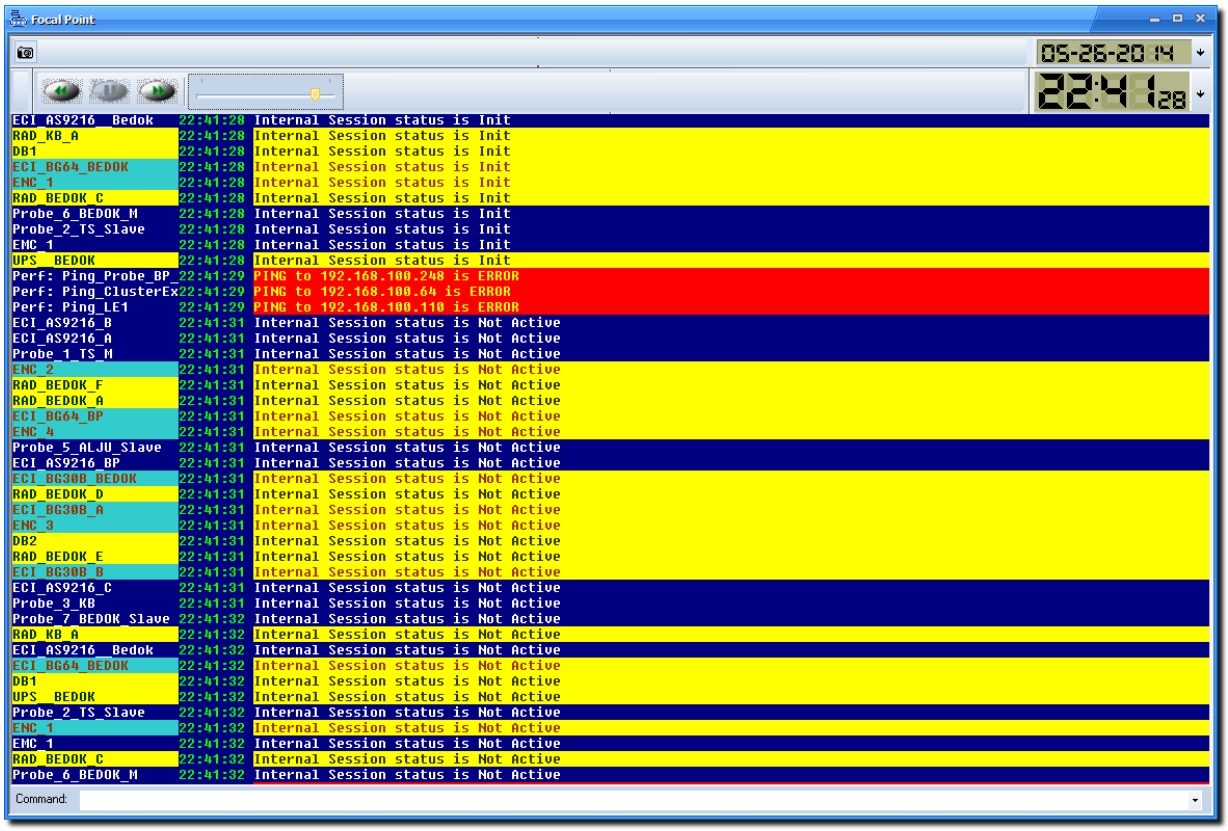
Focal Point Screen
Toolbar has setup screen and history
A clock on the upper right hand side of the screen shows current date and time.
Toolbar setup icon allows the user to setup the date and time format.
Toolbar camera icon allows viewing history of messages, clock will show date and time for history items.

Each line displayed on the Focal Point screen has three fields:

Source	Message source. This is the session name if it came from a session, or the user name if the command was typed at the Command window.
Time	Time the message arrived at Event24x7
Message	The message text.

5.2.1 Focal Point History

Focal Point history screen lists previous records along with their time and date for easy tracking. This enables the user to see all the events that occurred previously.


Focal Point
05-26-20 14
22:41:28
ECI_AS9216__Bedok 22:41:28 Internal Session status is Init
RAD_KB_A 22:41:28 Internal Session status is Init
DB1 22:41:28 Internal Session status is Init
ECI_BG64_BEDOK 22:41:28 Internal Session status is Init
ENC_1 22:41:28 Internal Session status is Init
RAD_BEDOK_C 22:41:28 Internal Session status is Init
Probe_6_BEDOK_M 22:41:28 Internal Session status is Init
Probe_2_TS_Slave 22:41:28 Internal Session status is Init
EMC_1 22:41:28 Internal Session status is Init
UPS__BEDOK 22:41:28 Internal Session status is Init
Perf: Ping_Probe_BP 22:41:29 PING to 192.168.100.248 is ERROR
Perf: Ping_ClusterEx 22:41:29 PING to 192.168.100.64 is ERROR
Perf: Ping_LE1 22:41:29 PING to 192.168.100.110 is ERROR
ECI_AS9216_B 22:41:31 Internal Session status is Not Active
ECI_AS9216_A 22:41:31 Internal Session status is Not Active
Probe_1_TS_M 22:41:31 Internal Session status is Not Active
ENC_2 22:41:31 Internal Session status is Not Active
RAD_BEDOK_F 22:41:31 Internal Session status is Not Active
RAD_BEDOK_A 22:41:31 Internal Session status is Not Active
ECI_BG64_BP 22:41:31 Internal Session status is Not Active
ENC_4 22:41:31 Internal Session status is Not Active
Probe_5_ALJU_Slave 22:41:31 Internal Session status is Not Active
ECI_AS9216_BP 22:41:31 Internal Session status is Not Active
ECI_BG30B_BEDOK 22:41:31 Internal Session status is Not Active
RAD_BEDOK_D 22:41:31 Internal Session status is Not Active
ECI_BG30B_A 22:41:31 Internal Session status is Not Active
ENC_3 22:41:31 Internal Session status is Not Active
DB2 22:41:31 Internal Session status is Not Active
RAD_BEDOK_E 22:41:31 Internal Session status is Not Active
ECI_BG30B_B 22:41:31 Internal Session status is Not Active
ECI_AS9216_C 22:41:31 Internal Session status is Not Active
Probe_3_KB 22:41:31 Internal Session status is Not Active
Probe_7_BEDOK_Slave 22:41:32 Internal Session status is Not Active
RAD_KB_A 22:41:32 Internal Session status is Not Active
ECI_AS9216__Bedok 22:41:32 Internal Session status is Not Active
ECI_BG64_BEDOK 22:41:32 Internal Session status is Not Active
DB1 22:41:32 Internal Session status is Not Active
UPS__BEDOK 22:41:32 Internal Session status is Not Active
Probe_2_TS_Slave 22:41:32 Internal Session status is Not Active
ENC_1 22:41:32 Internal Session status is Not Active
EMC_1 22:41:32 Internal Session status is Not Active
RAD_BEDOK_C 22:41:32 Internal Session status is Not Active
Probe_6_BEDOK_M 22:41:32 Internal Session status is Not Active
Command:

Icons:

Rewind - scrolls back on history events from set time and date.

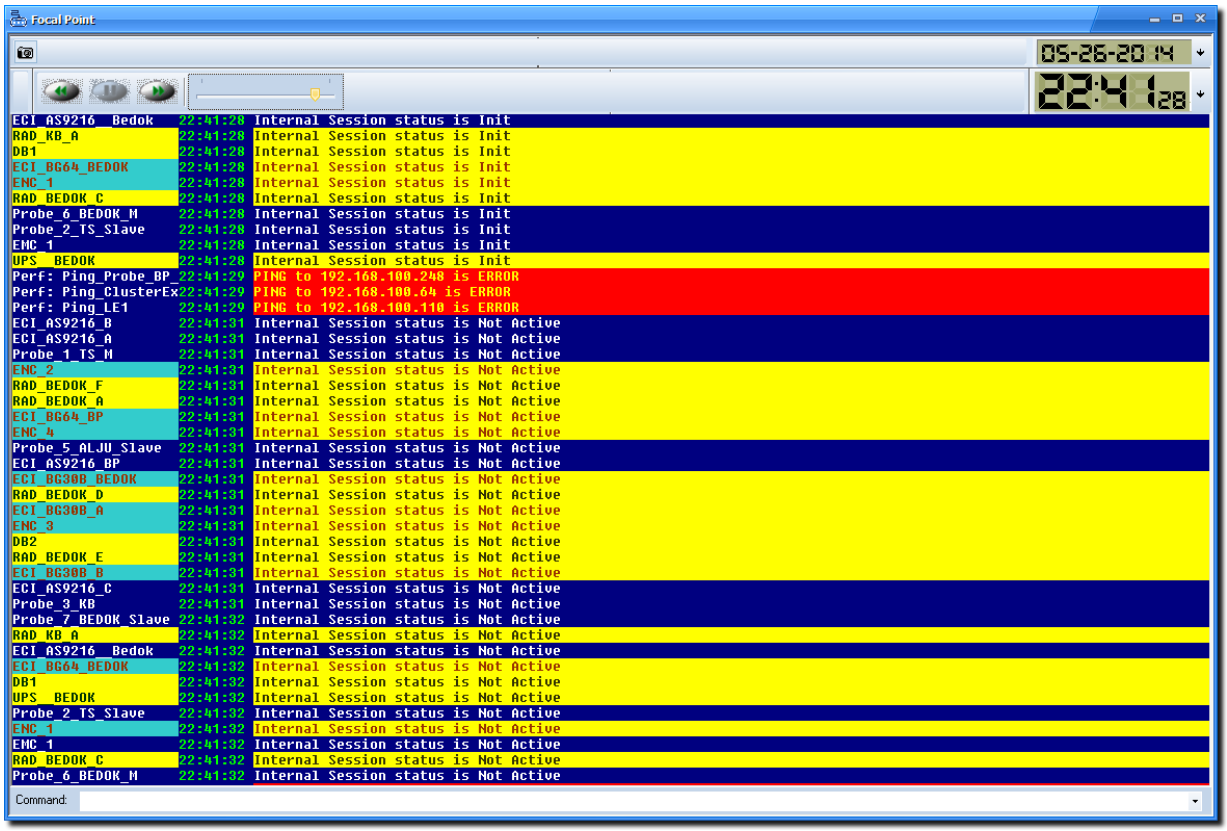
Pause - pause history events scrolling.

Forward - scroll history events from set time and date and onwards.

Scrolling speed on the scale of 1-10.

5.2.2 Focal Point History Timeframe

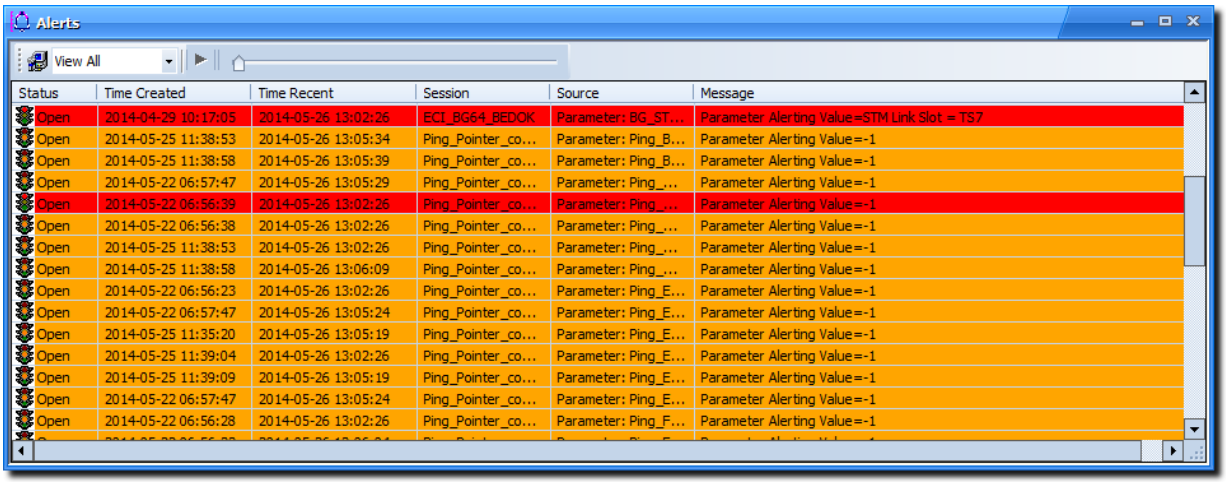
User may choose date and time frame to view previous events in the history screen.
This allows the user to focus on a problem, and to track the events that led to the problem.


Focal Point
05-26-20 14
22:41:28
ECI_AS9216__Bedok 22:41:28 Internal Session status is Init
RAD_KB_A 22:41:28 Internal Session status is Init
DB1 22:41:28 Internal Session status is Init
ECI_BG64_BEDOK 22:41:28 Internal Session status is Init
ENC_1 22:41:28 Internal Session status is Init
RAD_BEDOK_C 22:41:28 Internal Session status is Init
Probe_6_BEDOK_M 22:41:28 Internal Session status is Init
Probe_2_TS_Slave 22:41:28 Internal Session status is Init
EMC_1 22:41:28 Internal Session status is Init
UPS__BEDOK 22:41:28 Internal Session status is Init
Perf: Ping_Probe_BP 22:41:29 PING to 192.168.100.248 is ERROR
Perf: Ping_ClusterEx 22:41:29 PING to 192.168.100.64 is ERROR
Perf: Ping_LE1 22:41:29 PING to 192.168.100.110 is ERROR
ECI_AS9216_B 22:41:31 Internal Session status is Not Active
ECI_AS9216_A 22:41:31 Internal Session status is Not Active
Probe_1_TS_M 22:41:31 Internal Session status is Not Active
ENC_2 22:41:31 Internal Session status is Not Active
RAD_BEDOK_F 22:41:31 Internal Session status is Not Active
RAD_BEDOK_A 22:41:31 Internal Session status is Not Active
ECI_BG64_BP 22:41:31 Internal Session status is Not Active
ENC_4 22:41:31 Internal Session status is Not Active
Probe_5_ALJU_Slave 22:41:31 Internal Session status is Not Active
ECI_AS9216_BP 22:41:31 Internal Session status is Not Active
ECI_BG30B_BEDOK 22:41:31 Internal Session status is Not Active
RAD_BEDOK_D 22:41:31 Internal Session status is Not Active
ECI_BG30B_A 22:41:31 Internal Session status is Not Active
ENC_3 22:41:31 Internal Session status is Not Active
DB2 22:41:31 Internal Session status is Not Active
RAD_BEDOK_E 22:41:31 Internal Session status is Not Active
ECI_BG30B_B 22:41:31 Internal Session status is Not Active
ECI_AS9216_C 22:41:31 Internal Session status is Not Active
Probe_3_KB 22:41:31 Internal Session status is Not Active
Probe_7_BEDOK_Slave 22:41:32 Internal Session status is Not Active
RAD_KB_A 22:41:32 Internal Session status is Not Active
ECI_AS9216__Bedok 22:41:32 Internal Session status is Not Active
ECI_BG64_BEDOK 22:41:32 Internal Session status is Not Active
DB1 22:41:32 Internal Session status is Not Active
UPS__BEDOK 22:41:32 Internal Session status is Not Active
Probe_2_TS_Slave 22:41:32 Internal Session status is Not Active
ENC_1 22:41:32 Internal Session status is Not Active
EMC_1 22:41:32 Internal Session status is Not Active
RAD_BEDOK_C 22:41:32 Internal Session status is Not Active
Probe_6_BEDOK_M 22:41:32 Internal Session status is Not Active
Command:

To select the time frame in the focal point history use pull down menus to choose date and time, and then press either **left arrow** for viewing of events from selected time and date and backwards, or **right arrow** to see list of events from the selected timeframe and onwards.

5.3 Alerts

The Alerts screen is designed to assist system operators. It signals that a problem exists, and the Alert remains active until the problem is resolved.


Alerts
View All
Status
Time Created
Time Recent
Session
Source
Message
Open 2014-04-29 10:17:05 2014-05-26 13:02:26 ECI_BG64_BEDOK Parameter: BG_ST... Parameter Alerting Value=STM Link Slot = TS7
Open 2014-05-25 11:38:53 2014-05-26 13:05:34 Ping_Pointer_co... Parameter: Ping_B... Parameter Alerting Value=-1
Open 2014-05-25 11:38:58 2014-05-26 13:05:39 Ping_Pointer_co... Parameter: Ping_B... Parameter Alerting Value=-1
Open 2014-05-22 06:57:47 2014-05-26 13:05:29 Ping_Pointer_co... Parameter: Ping_... Parameter Alerting Value=-1
Open 2014-05-22 06:56:39 2014-05-26 13:02:26 Ping_Pointer_co... Parameter: Ping_... Parameter Alerting Value=-1
Open 2014-05-22 06:56:38 2014-05-26 13:02:26 Ping_Pointer_co... Parameter: Ping_... Parameter Alerting Value=-1
Open 2014-05-25 11:38:53 2014-05-26 13:02:26 Ping_Pointer_co... Parameter: Ping_... Parameter Alerting Value=-1
Open 2014-05-25 11:38:58 2014-05-26 13:06:09 Ping_Pointer_co... Parameter: Ping_... Parameter Alerting Value=-1
Open 2014-05-22 06:56:23 2014-05-26 13:02:26 Ping_Pointer_co... Parameter: Ping_E... Parameter Alerting Value=-1
Open 2014-05-22 06:57:47 2014-05-26 13:05:24 Ping_Pointer_co... Parameter: Ping_E... Parameter Alerting Value=-1
Open 2014-05-25 11:35:20 2014-05-26 13:05:19 Ping_Pointer_co... Parameter: Ping_E... Parameter Alerting Value=-1
Open 2014-05-25 11:39:04 2014-05-26 13:02:26 Ping_Pointer_co... Parameter: Ping_E... Parameter Alerting Value=-1
Open 2014-05-25 11:39:09 2014-05-26 13:05:19 Ping_Pointer_co... Parameter: Ping_E... Parameter Alerting Value=-1
Open 2014-05-22 06:57:47 2014-05-26 13:05:24 Ping_Pointer_co... Parameter: Ping_E... Parameter Alerting Value=-1
Open 2014-05-22 06:56:28 2014-05-26 13:02:26 Ping_Pointer_co... Parameter: Ping_F... Parameter Alerting Value=-1

When a rule is triggered as a result of problem interception, it can optionally open an Alert with the Action! command of the rule.

5.3.1 Alert's Attributes

Background Color

Alert background color represents the Alert's severity.
Red – Severe, Most Critical problem.
Orange – Error problem.
Yellow – Warning problem.
White – Solved problem. Alert has been closed.

Sound effects

When an Alert is added to the Alerts screen it is possible to play a sound to get the operator's attention. With the Alert Setup screen described in the Alerts section, it is possible to assign a specific sound to each one of the three Alert severity types.

Assign Alert

An Alert represents an open problem that the operators have to resolve. An Event24x7 Administrator user can assign an alert to a specific user. It signals that this user (operator) is now responsible exclusively for resolving the problem pointed out by the Alert.

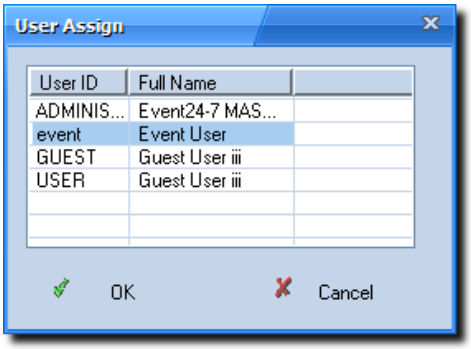
5.3.2 Operations Applying to Alerts

Several operations may be performed on an Alert, depending on its status. Access to this feature is achieved by placing the cursor on an Alert line and clicking the right mouse button. A pop-up window opens to show the available operations. Some of the operations require Event24x7 Administrator privileges.

Alert Status	Available operations	
Open	**Assign**	Assign the Alert to a specific user**.**
	Close	Change the Alert's status to Closed**.**
	Delete	Remove the Alert from the alert list.
	History	Display Alert's history.
Assign	**Assign**	Assign the Alert to a specific user
	Reassign	Remove the Alert assignment. Change the status back to Open.
	Close	Change the Alert's status to Closed**.**
	Delete	Remove the Alert from the alert list.
	History	Display Alert's history.
Close	**Reopen**	Change the status back to Open**.**
	Delete	Remove the Alert from the alert list.
	History	Display Alert's history.

5.3.3 User Assign Process

When choosing this option from the Alert's Operation pop-up window the following dialog opens:



The dialog presents the entire list of users defined to Event24x7. The assignment of a user is done by selecting a user from the list and clicking the OK button. As a result, the dialog will close and the new status will be displayed at the appropriate alert.

5.3.4 Toolbar

The Toolbar contains the following options:

Setup

Start the Setup screen.

View Filter

Filter the viewed Alerts. The available options:

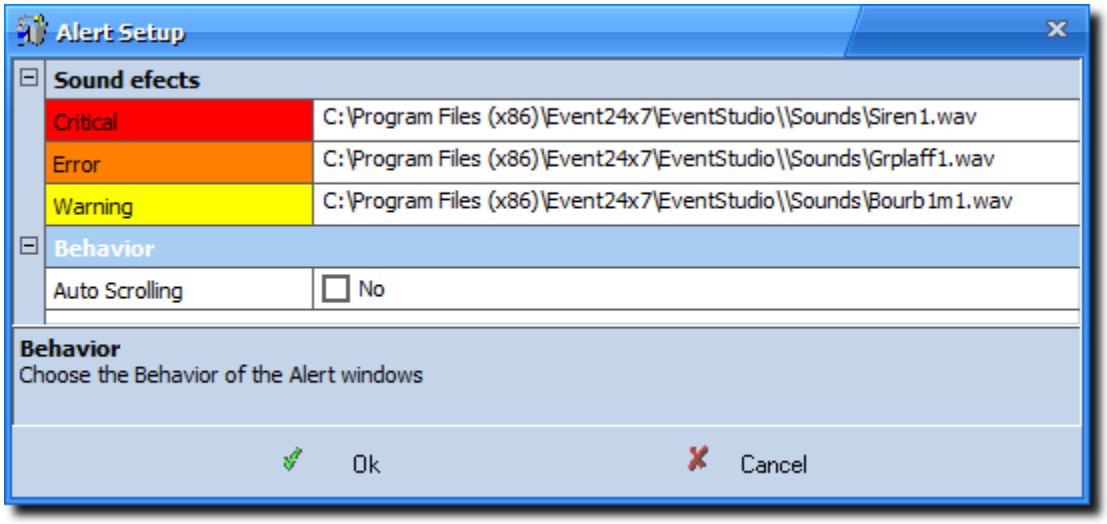
View All	View All Alerts regardless of their status.
Existing Problems	View Alerts that represent problems. It contains Alerts with status of **Open** or **Assign**.
Not Assign	View Alerts that represent problems. Show Alerts with status **Open** only. It represents problems that were not assigned yet to a specific operator.

Sound Control

A sound from wav or mp3 can be assign to any one of the three Alert severity types. This control monitors the progress of the sound played.

5.3.5 Setup

When choosing the Setup option from the Toolbar, the following window will be displayed:

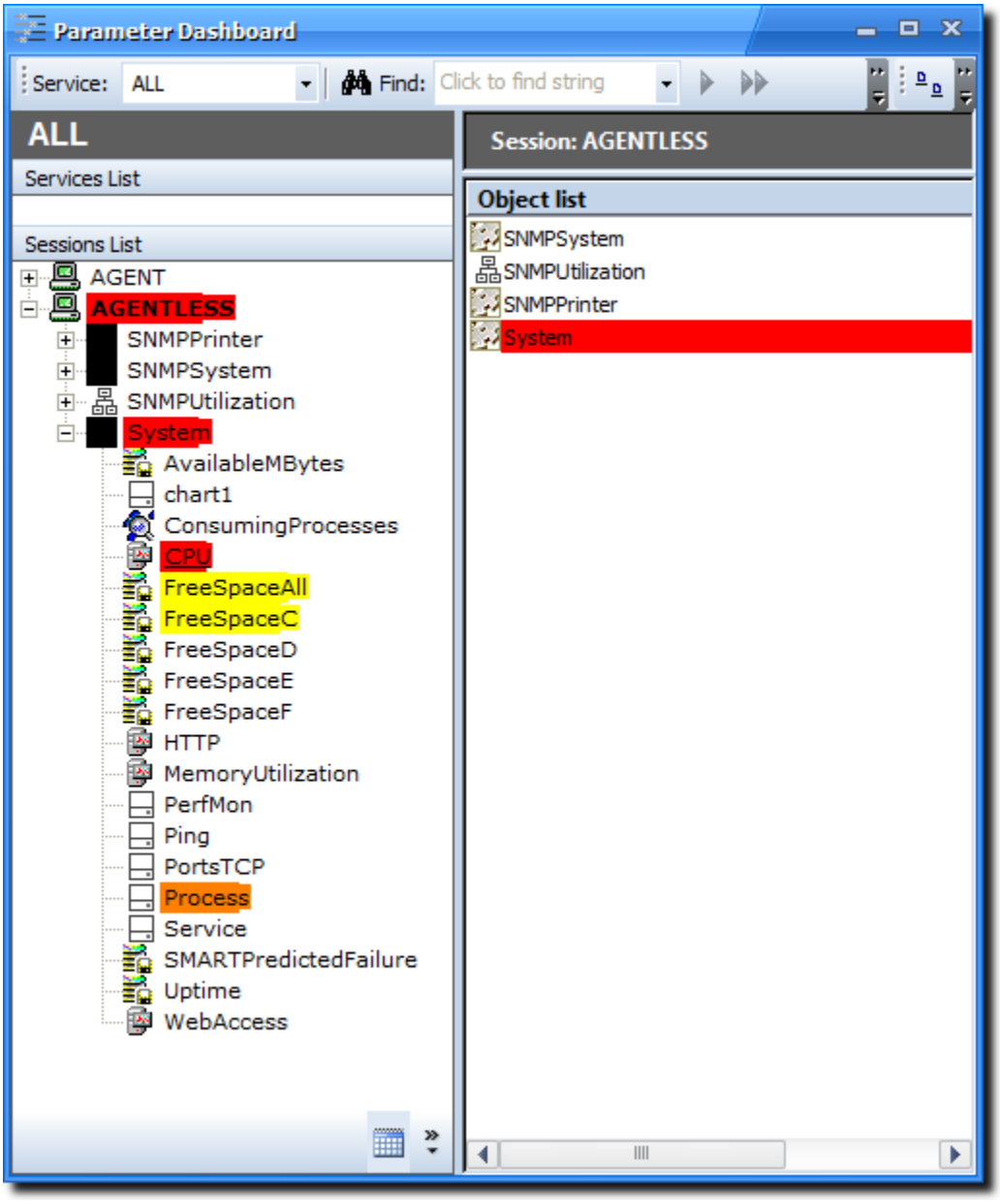


For each one of the three Alert severity types, choose a sound that will be played when an Alert of this type is added.

Auto scrolling option causes the Alert windows to ensure that a new added alert will be visible on the Alert screen.

5.4 Dashboard

The Dashboard screen displays monitored objects according to their threshold. The Dashboard is the Pro Active Approach engine's results.



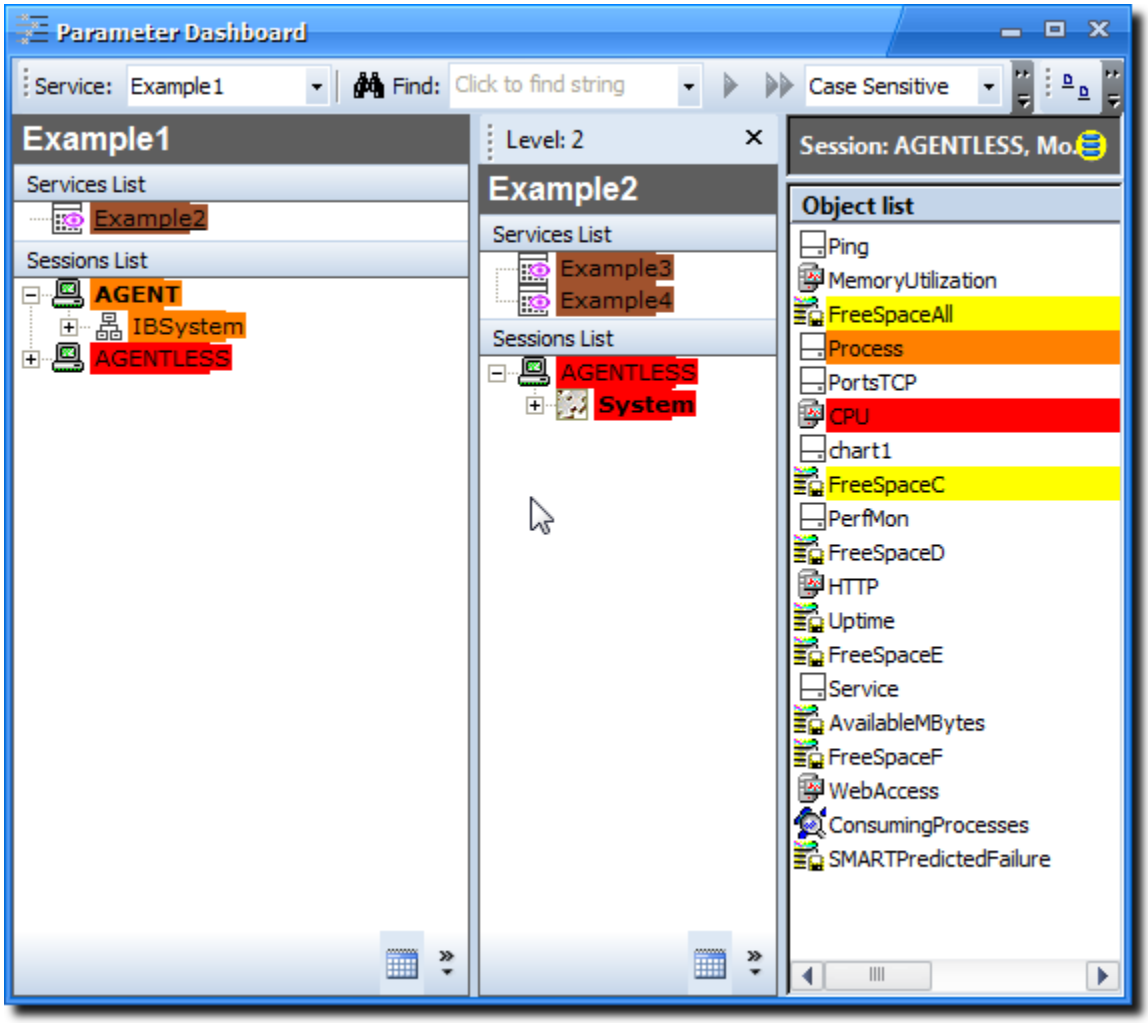
The Dashboard screen display the monitored parameters in their hierarchical structure: Service, Session Monitors, and all the Parameters related to Monitors.

The Parameter's background color is according to their state. The Monitor state is the highest state its Parameters have. Same way, the Session state is the highest state of its Monitors.

The dashboard screen is updated automatically. When a state changes, Event24x7 updates the Parameter Dashboard screen immediately.

5.4.1 Drill down Services

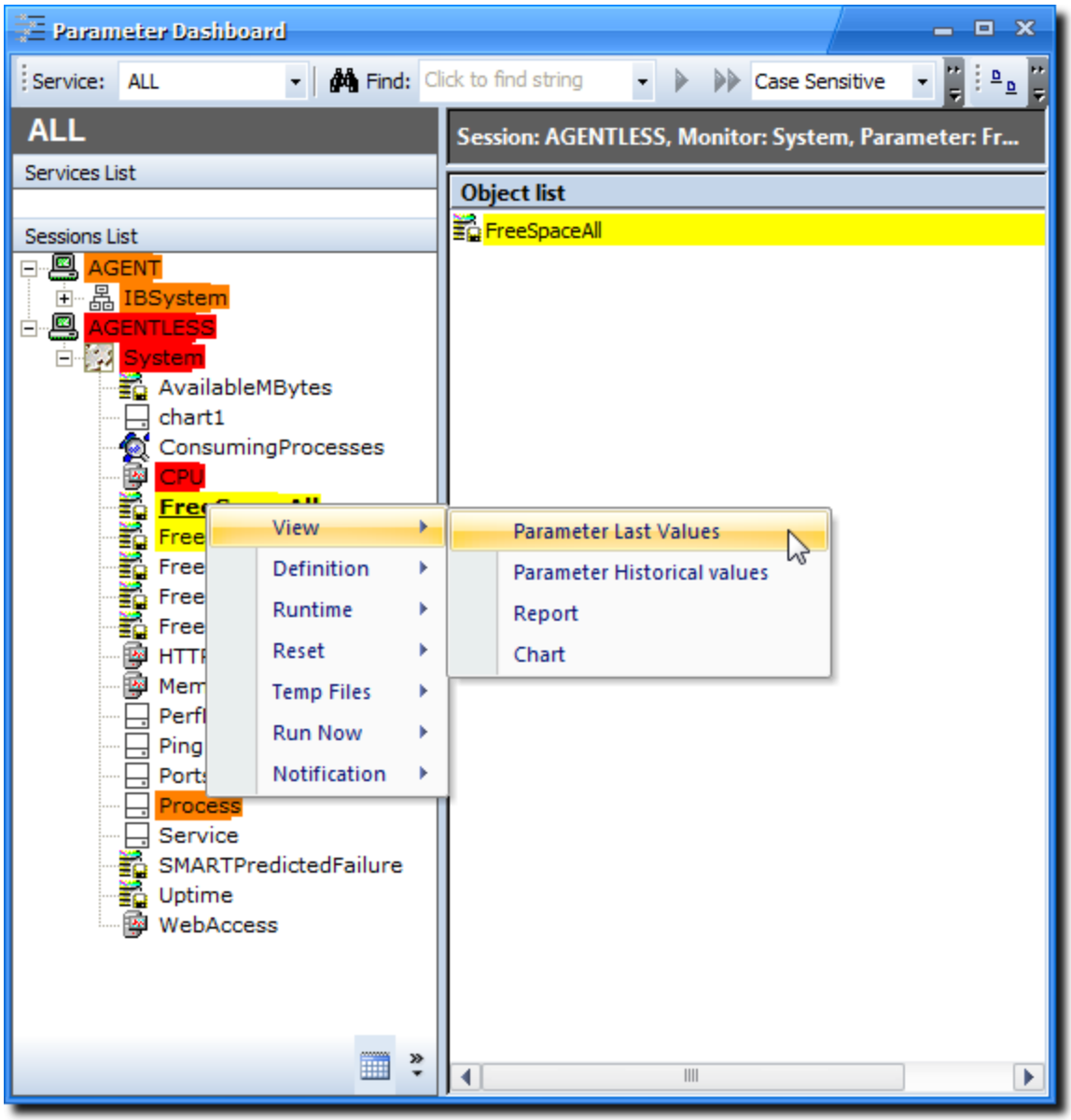
The service has a hierarchical structure.
When you double click the mouse button over a service, the selected service structure will be opened on the right side.



a

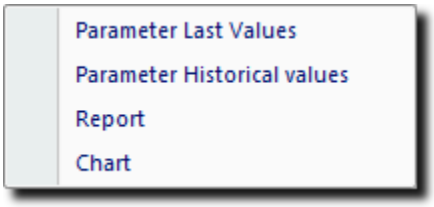
5.4.2 Investigate Parameter State

Place the cursor over a parameter at the right screen part and clicking the mouse right button will open a popup menu with investigating options:



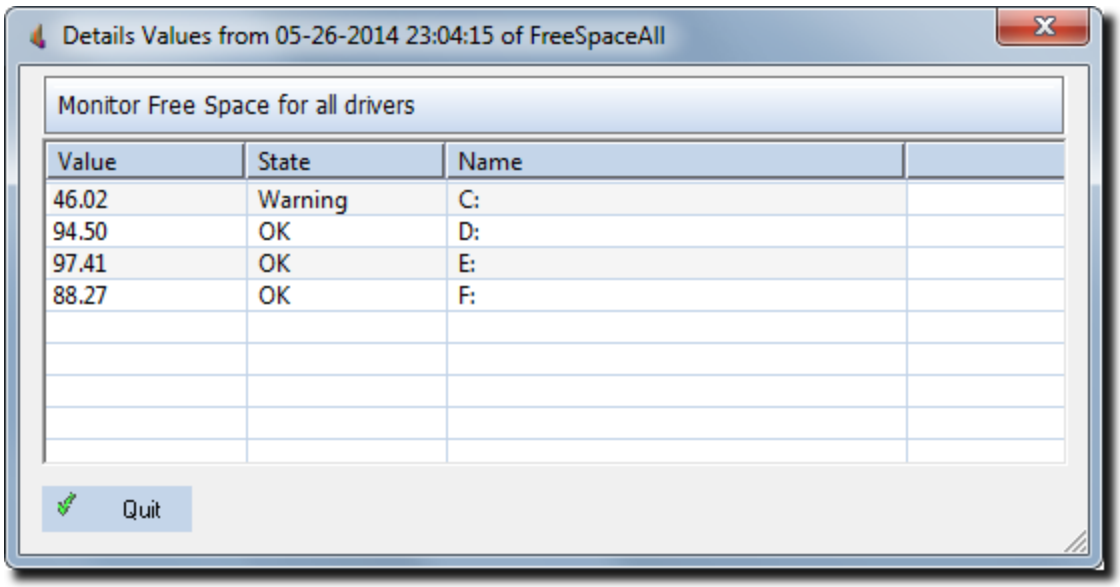
Use the left mouse button double click to drill down to the default view option.
The default view option is defined at the Chart? Parameter definition screen,

5.4.3 View Options



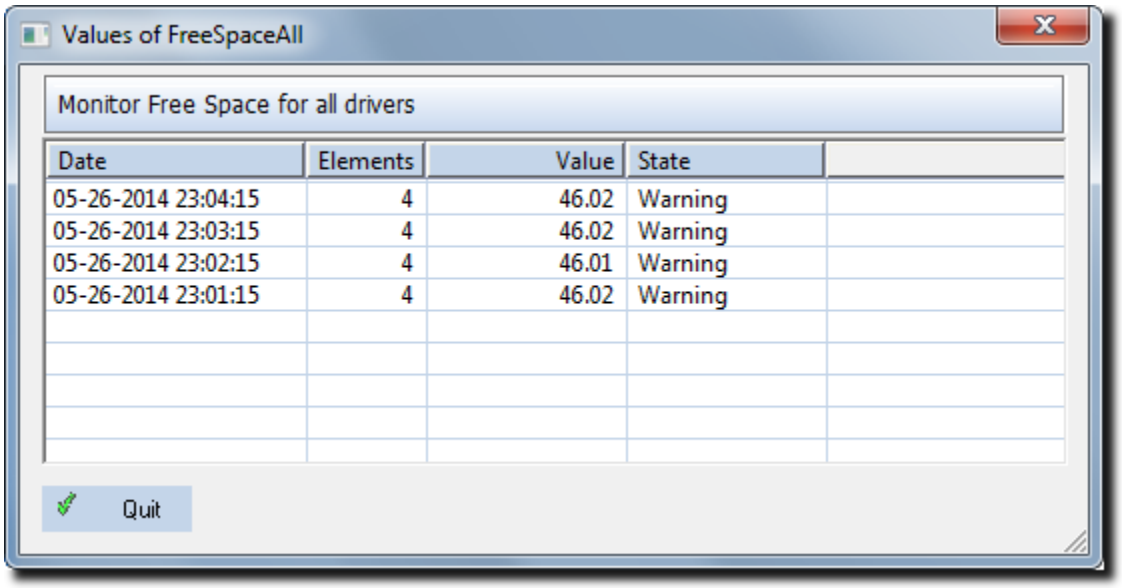
5.4.3.1 Parameter Last Values

Display table with the recent values of the parameter



The Value and Name fields are taken according to the parameter Create? tab definition at the Fields Pattern position.
The State is evaluated according to the Value of the Parameter and it's threshold.

5.4.3.2 Parameter Historical values



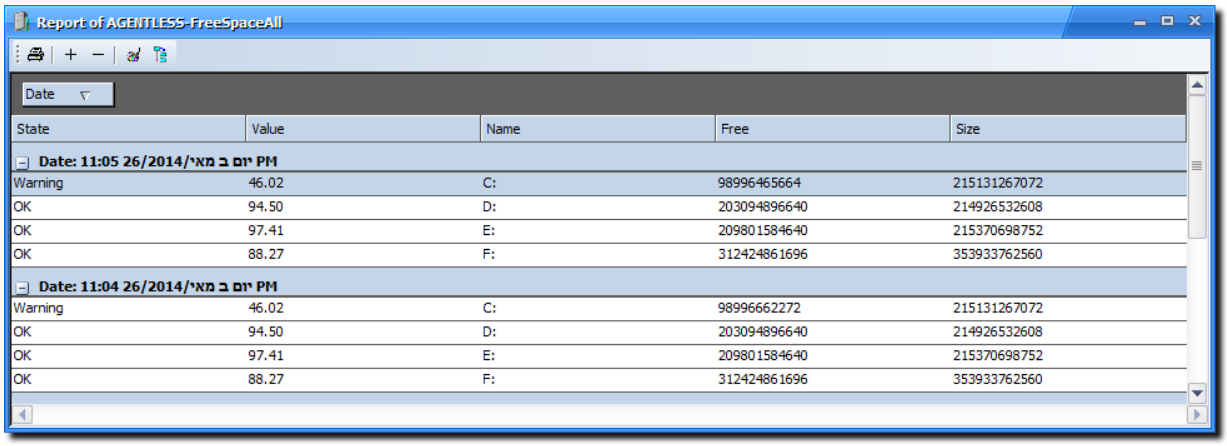
The screen displays the parameter's historical values.
Each entry represents a set of Collector and Parameter activities to retrieve the Parameter's state.

Line contains the Time of the value, number of elements in each check, the Value and the Parameter's highest state.

In case that the parameter has multiple occurrences (for example, the FreeSpaceAll has an entry for each drive at the monitored computer), every one of them gets a state according to the threshold. The state of the parameter is set as the highest calculated state of all of them.

The number of historical values kept for each parameter are defined at the Parameter Definition Screen in the Create? tab at the Occurrence field.

5.4.3.3 Report



The report option displays the historical values with the report tool.

The display columns are all the Parameter's fields that are defined for this parameter. The user can drag a column into the sort line and change the sort fields of the report dynamically.

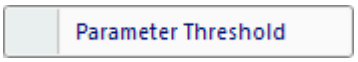
5.4.3.4 Chart

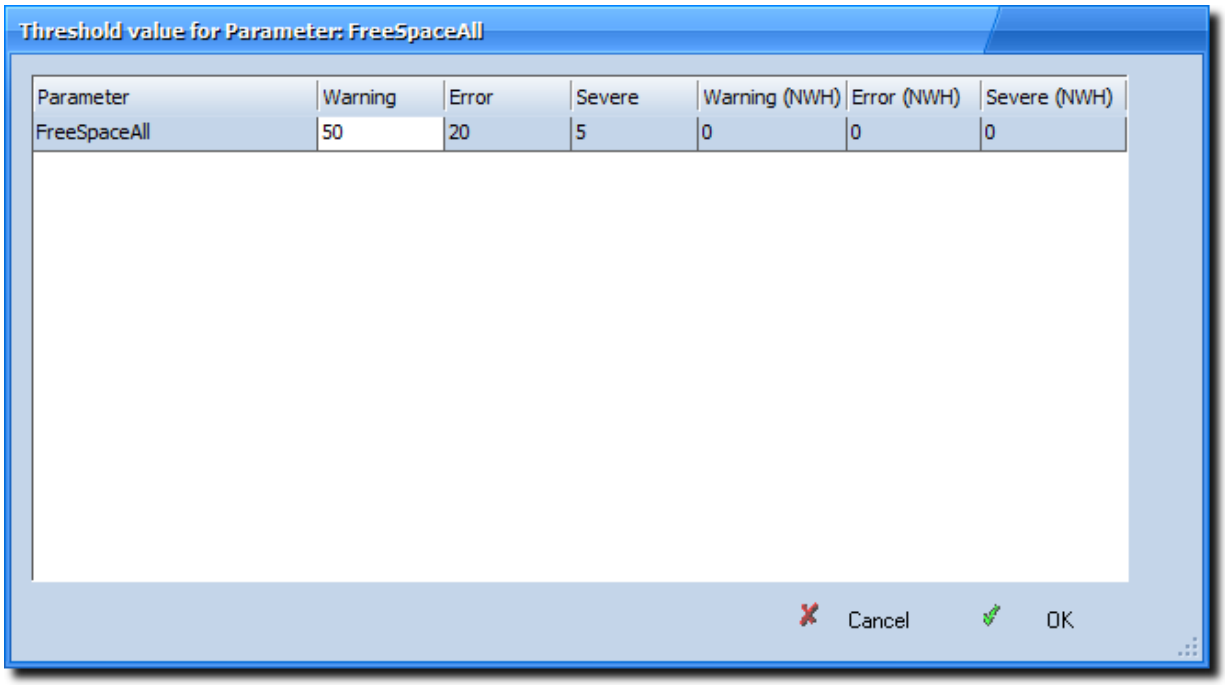
In order to view the result as a chart you have to set the Display option of the parameter as a chart.

5.4.4 Definition Options

Open the Parameter definition screen with the current Parameter.

5.4.5 Runtime Options

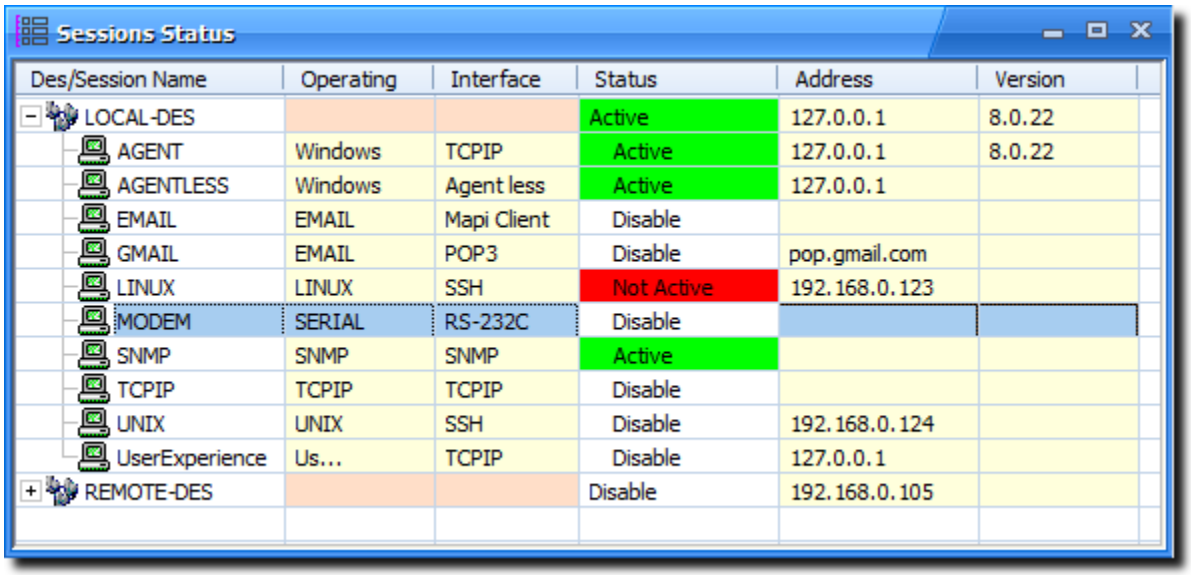




Open the defined threshold values for the parameter.
This screen lets you set a new threshold for the parameter. By pressing the OK button the new threshold values will be affected starting from the next cycle of the parameter.

5.5 Session Status

Session Status screen shows the DES Status as well as the sessions that are connected to it. The DES and Sessions are displayed in their hierarchical relation.

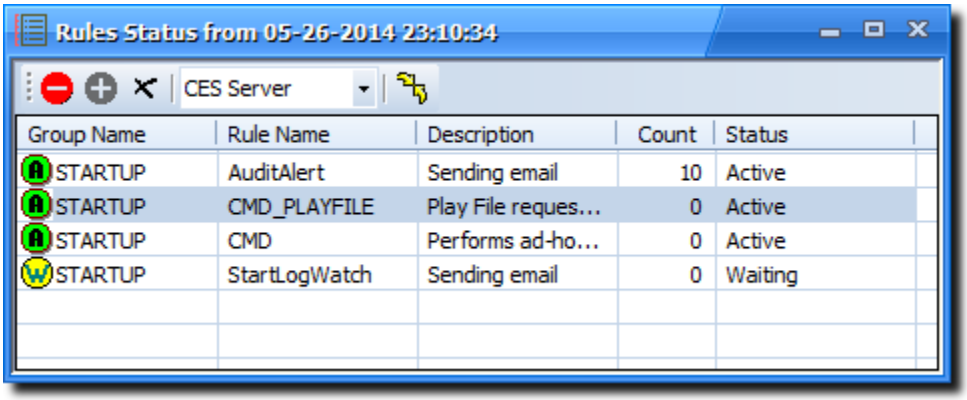


The Session Status displays the sessions defined for Event24x7 and their statuses.
Each line has a background color according to the session's status.
Color scheme is according to the Status:

Green - Active.
Yellow - Connecting.
Violet - Init.
Red - Error.
White - Disabled.

5.6 Rule Status

The Rule Status screen displays the status of all the active rules. A rule becomes active when Activate is performed from the Rule Definition screen. See Rules Definition and Action! Parameters for Rules sections.



A rule might have the following statuses:

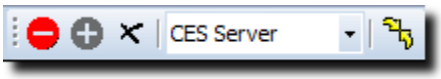
Active Rule is ready to be triggered.

Hold Rule is not eligible to be triggered.
The rule status was changes to Hold. It has to be released before it will be eligible to execute.

Waiting Rule is not eligible to be triggered.
The rule was activated but at least one of its parameters was not set. The reason might be the Time and Date from the **When?** tab, or due to a **Term** that was not set. When the problematic parameter is set, the rule becomes Active.

Running Rule is currently executing.

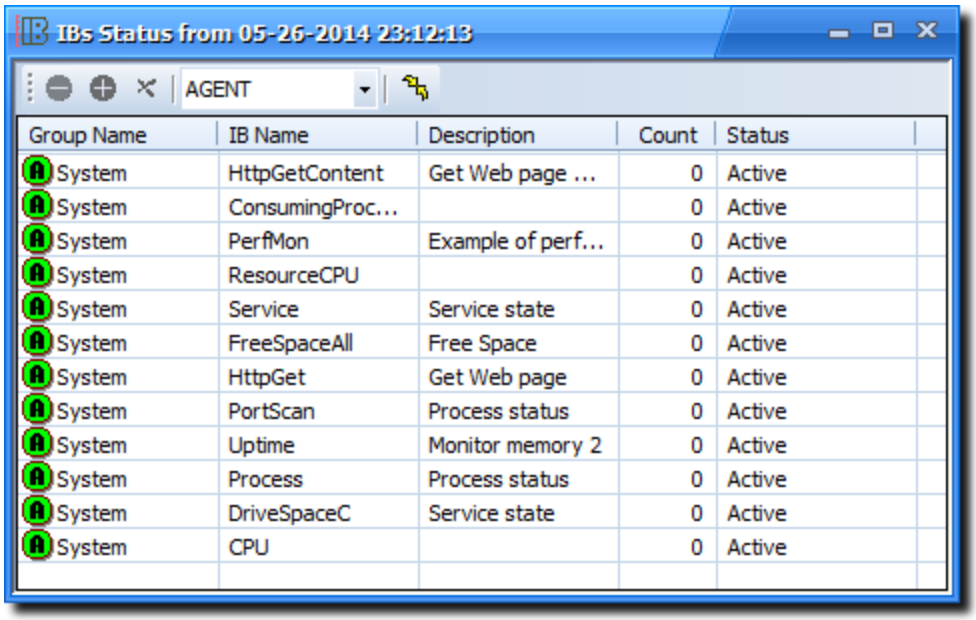
Toolbar



Hold		Change Active Alert to Hold status.
Free		Return Hold Alert to Active status.
Remove		Remove Alert from the Activate list.
Servers list		Choose Event24x7 session to focus on.

5.7 IBs Status

The IB Status screen displays the status of all the active IBs on Different RES Servers. An IB becomes active when Activate is performed from the IB Definition screen. See **IB Definition** .

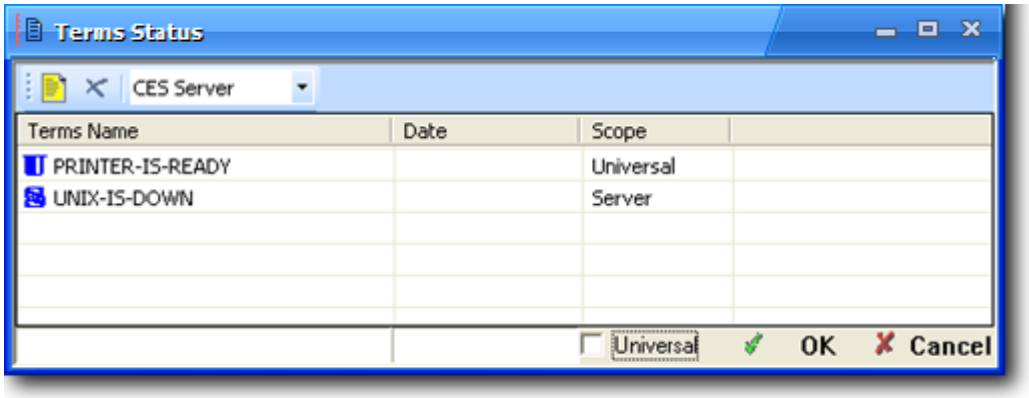


Group Name	IB Name	Description	Count	Status
System	HttpGetContent	Get Web page ...	0	Active
System	ConsumingProc...		0	Active
System	PerfMon	Example of perf...	0	Active
System	ResourceCPU		0	Active
System	Service	Service state	0	Active
System	FreeSpaceAll	Free Space	0	Active
System	HttpGet	Get Web page	0	Active
System	PortScan	Process status	0	Active
System	Uptime	Monitor memory 2	0	Active
System	Process	Process status	0	Active
System	DriveSpaceC	Service state	0	Active
System	CPU		0	Active

The IBs Status window has similar functionalities as the Rule Status window.

5.8 Terms Status

Terms Status lists all the user defined terms and allows updating of the terms.



Term has a scope of Server or Universal.
Scope Server is defined only at the server in which it defined.
Scope Universal is defined at all Event24x7 servers.

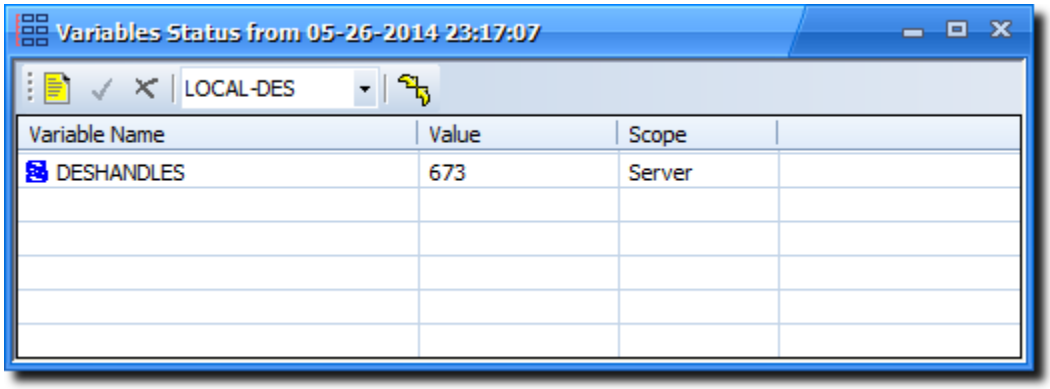
Universal Terms are displayed only at the CES Server.

Toolbar

Add New		Toggle the Add New Terms line. The line is displayed at the bottom of the Terms screen. To add a new terms fill the term's field and click on the OK button on that line.
Delete		Delete the selected terms.
Servers list		Choose Event24x7 Server to focus on.

5.9 Variables Status

Variables Status lists all user variables and allows updating of the variables.



There are two types of Event24x7 variables:

- **System variables.**
  These are handled exclusively by Event24x7. The user cannot change them, but can use them. For more information on system variables refer to System Variables section.

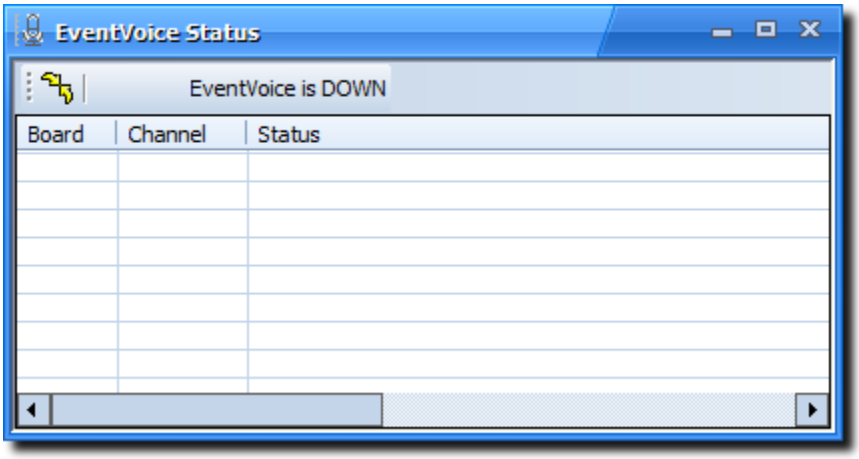
- **User variables.**
  These are variables that are handled from this screen and from the Action! tab by means of the SET command described in the Set section. A user variable is used to share data among different rules. When a rule is executed, it has access to the user variables currently defined. The SET command can change the value of these variables.

Toolbar

Add New		Toggle the Add New Variable line. The line is displayed at the bottom of the Variable screen. To add a new variable fill the variable's Name and Value field and click on the OK button while on that line.
Change		Change the selected variable value.
Delete		Delete the selected variable.
Servers list		Choose Event24x7 Server to focus on.

5.10 Voice Status

EventVoice Voice Status lists the voice cards and their channel statuses.

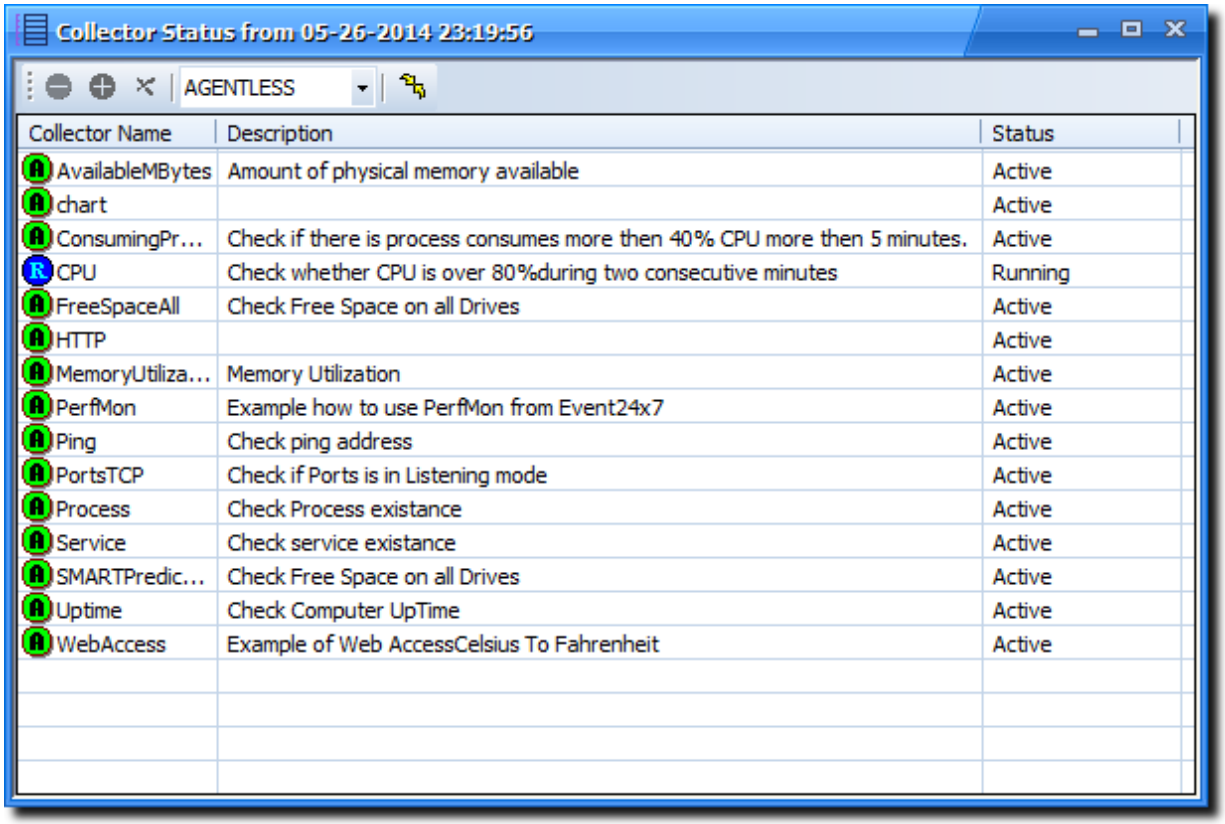


Press the refresh button to refresh statuses on screen.

5.11 Monitoring Statuses

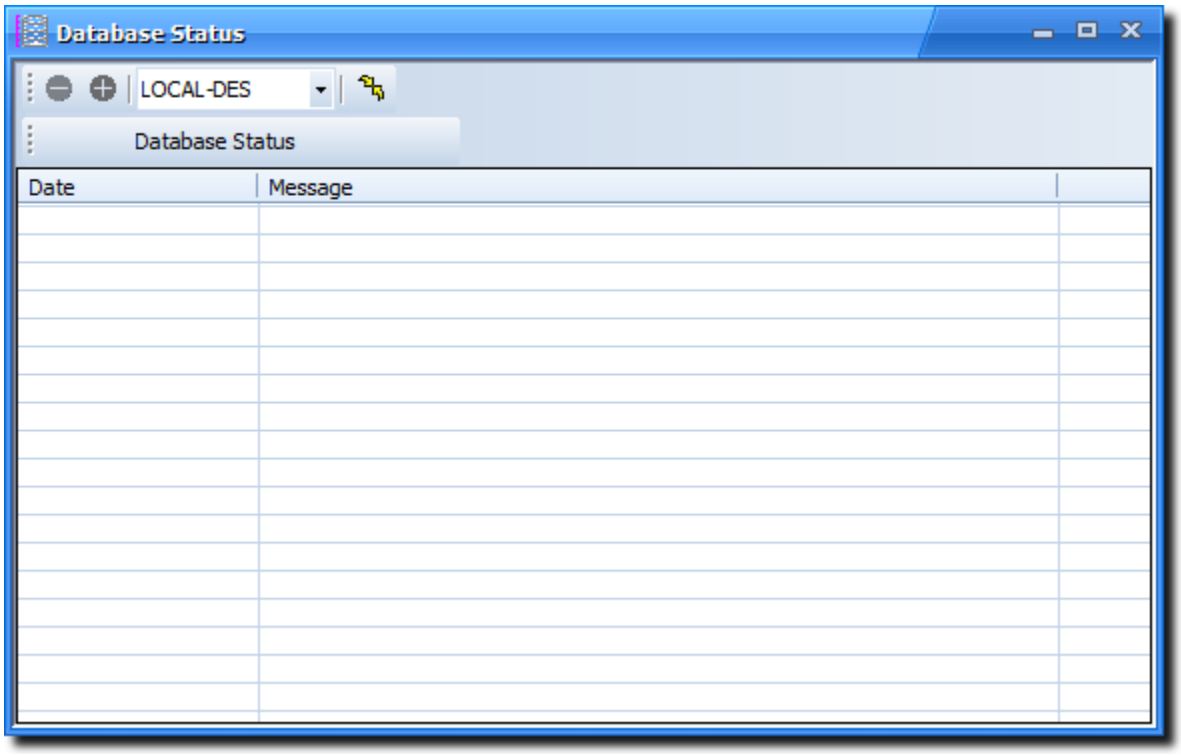
There are Statuses screens for Collector, Monitor and Parameter.

For example the Collector Status Screen:



The Monitoring Statues screens behave like the Rule Status screen with the same capabilities of Hold, Free and Delete entries.

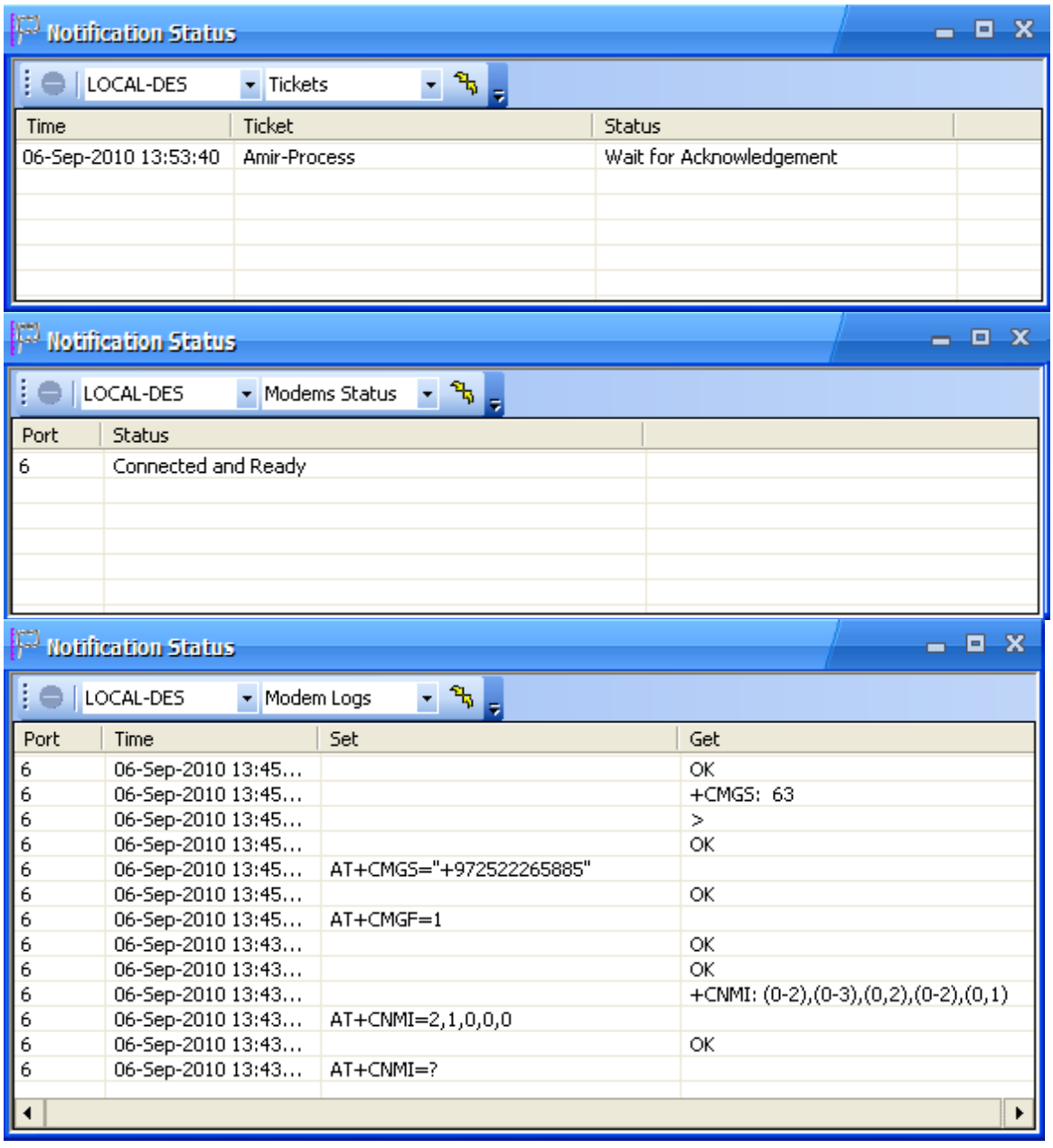
5.12 Database Status



Retrieves the status of the database in case a database is used.

Select requested DES and get the database at the selected DESs.

5.13 Notification Status

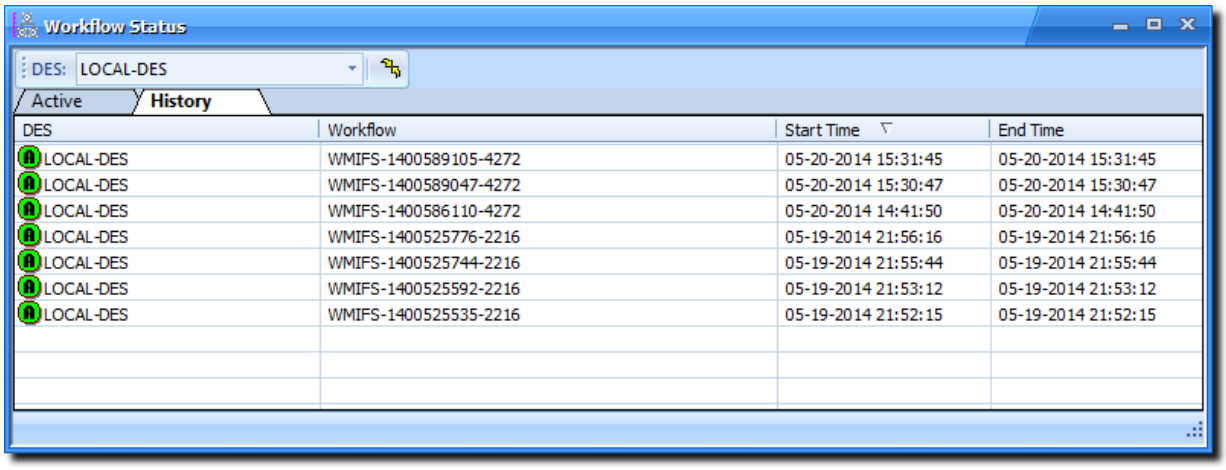


Retrieves the status of the modems connected to the selected DES.
Select requested DES and select the operation to display.
Available Operations:

- Tickets – Display alert sending status.

- Modems Status – Display connected modems status.
- Modem Logs – Display connected modems logs.

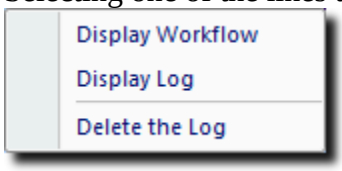
5.14 Workflow Status



The Workflow status screen displays the status of every workflow that is currently running or ran in the past.
There are two tabs:

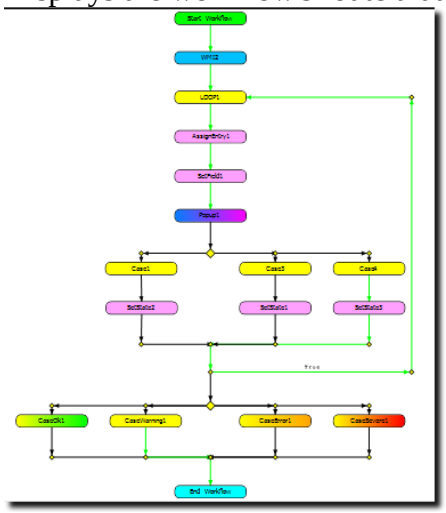
- Active – for active workflows.
- History – for historical workflows.

Selecting one of the lines and clicking right-click on the line will open this local menu:

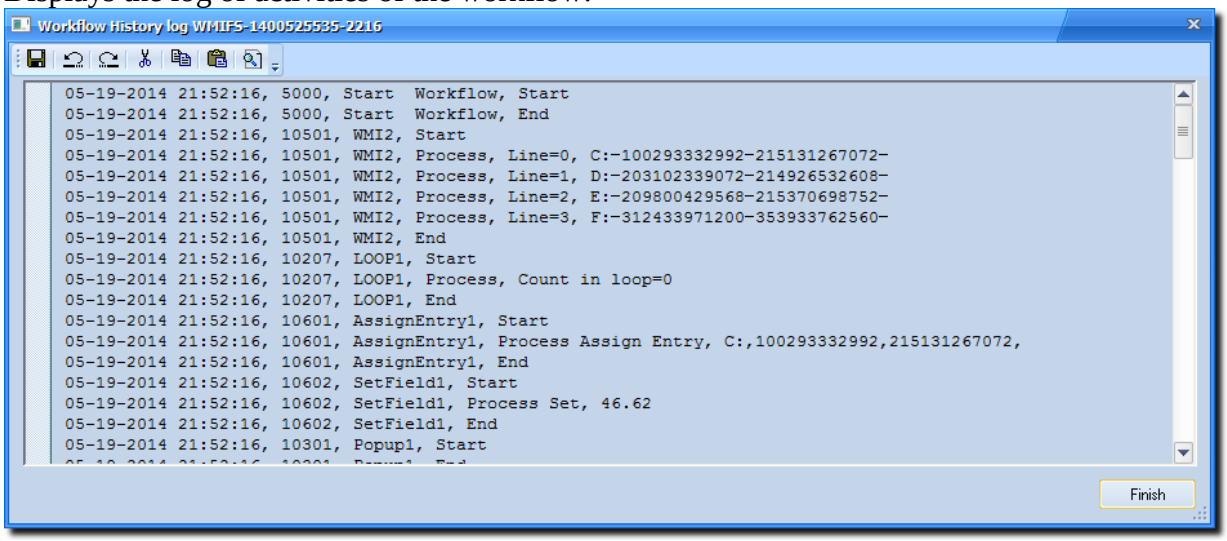


The options are:

- Display Workflow
  Displays the workflow's route that was taken. (In green color).



- Display Log
  Displays the log of activities of the workflow.



- Delete the Log
  Will delete this entry from the Workflow Status screen.

6. Monitoring Definitions

6.1 General

The Monitoring feature provides three approach types: **Pro Active**, **Exception** and **FileWatch**. To navigate between the three approach types click on each of the icons which appear on the bottom of the left side of the screen underneath the applicable tree view.

To select the **Pro Active** monitor click on the first left icon as highlighted here.

To select the **Exception** monitor click on the second icon as highlighted here.

To select the **File Watch** monitor click on the third icon as highlighted here.

To select the **IB Session** monitor click on the forth icon as highlighted here.

The **Pro Active** monitor is governed by three objects: Monitor, Collector and Parameter. Its purpose is to anticipate problematic scenarios and try to avoid them in advance. It does this by initiating cyclic checks every time interval. This interval is configured in the When! tab of the Collector. Details of the exact check to be conducted are specified in the execution! Tab of the collector. In the Parameter, we indicate how to react to the results of the checks conducted by the Collector. First, the parameter specifies exactly how the results of the collector's checks will be kept and in what field/s (For more details, refer to the Create Tab of the Parameter). Then, using these results, a list of additional checks is conducted (see Parameter's state? Tab) which end up in one of the following states: Severe, Error, Warning or Ok. For each state there is an appropriate Action! tab, which gives Event24x7 exact instructions what to do next.

The **Exception** and **FileWatch** monitors, as opposed to Pro Active can not anticipate errors in advance, but only intercept and detect them upon arrival. They work together: first, the file watch monitor which is alerted every time new data is written into a file and then the exception monitor which parses this data and looks for the appearance of a specific pattern. When such a pattern is intercepted and found, the exception monitor is set to a specific state which lets the parameter know exactly what to do next (see applicable State Action! tab).
All this information is stored in different objects. The Exception monitor is comprised of three objects: Monitor, Interceptor and Parameter while the FileWatch monitor is comprised of only two: Monitor and FileWatch.

NOTE: The **Exception** monitor can also work independently when requested to intercept specific **SNMP** traps and messages or specific **Information Base elements**.

The **Information Base** monitor resides on the remote machine and checks it consistently and efficiently, in a proactive approach. The Information Base can:

- Allow for local checks on the agent platform of facilities such as NT log files, CPU usage, memory usage, hard disk space, processes and services.
- Monitor local applications, acting upon Information Base rules to keep the application on track.
- Support a proactive approach in which you define the steps to be taken in order to prevent problematic situations automatically.

The predefined Information Base defines the statuses of the objects and the steps that should be taken in order to prevent problematic situations automatically. For example:

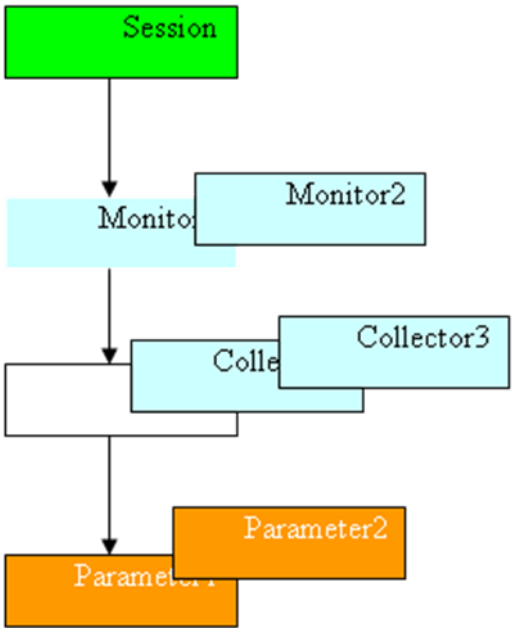
IF	CPU threshold is higher than 90%
AND	process MyServer has more than 75 open handles
Action!	Restart service CheckHandles.

Every Action item that starts with “IB” will automatically sent the result after every cycle, to the DES. The result can be caught and handled by an Exception monitor with an Information Base (IB) element in the Interceptor.

6.2 Components relationship

6.2.1 In a Pro-Active Monitor

The Relationship of a Monitor, Collectors and Parameters are a Tree structure 1-N



Monitor **Container of Checks**

Collector **Perform single check of any command**

Parameter **Evaluate the result**
Map into proper field
Set State
Performs actions according to this state

6.2.2 In an Exception Monitor

The Relationship of a Monitor, Interceptors and Parameters are a Tree structure 1-N

Monitor **Container of Checks**

Interceptor **Detect the appearance of specific strings in a file.**

Parameter **Evaluate the result**
Map into proper field
Set State
Performs actions according to this state

6.2.3 In a File Watch Monitor

The Relationship of a Monitor and FileWatches are a Tree structure 1-N

Monitor **Container of Checks**

FileWatch **For each file intercepted - its name and exact location**

6.2.4 In an IB Session Monitor (IB)

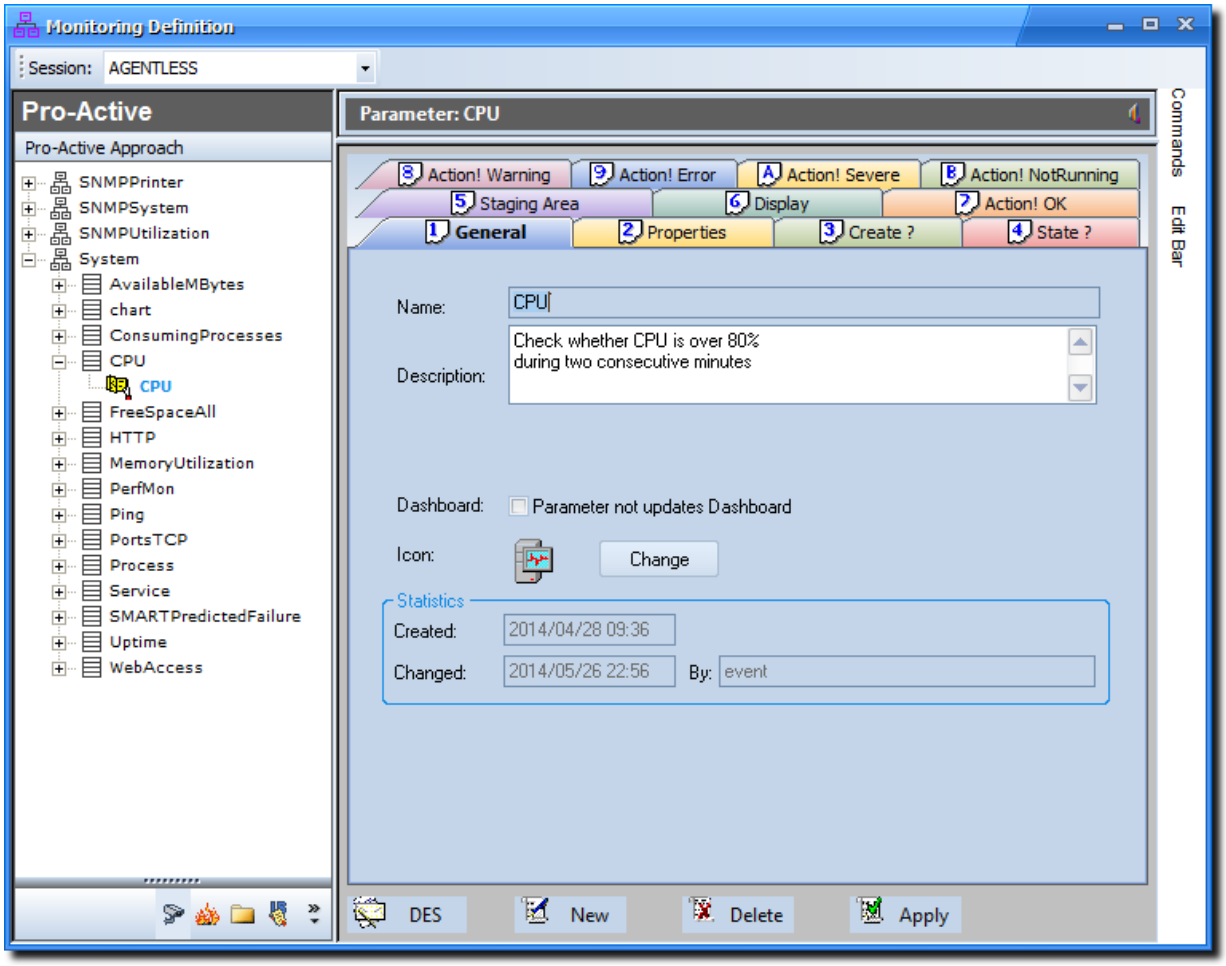
The Relationship of a Monitor and Information Bases are a Tree structure 1-N

Monitor **Container of Checks**

IB **Perform multiple checks and actions**

6.3 Pro-Active Monitoring Definition

This is the navigation screens that guide you to the **Monitor**, **Collector** and **Parameter** definition screens.



The highlighted icon
Indicates Pro-Active.

When entering this screen the objects are grayed out. You have to choose a session from the active session defined in Event24x7, and then you will be entitled to select an object type from Monitor, Collector or Parameter.

The left side shows the objects in a hierarchical structure.

One of the big advantages of Event24x7 is that it is an open architecture and you can add your own resource monitoring to suite your organization. As always, using event24x7 is very easy and it is similar to the way you use the Rule definition in Event24x7.

6.3.1 Adding a new object

Monitoring activities are comprised of the three objects: Monitor, Collector and Parameter that relate to a specific session. The relation is hierarchically structured as a One-to-Many tree.

You have the following ways to add objects:

- Skeletons
  When adding a pre-defined solution from the Skeletons, Event24x7 adds a complete solution.

- Wizard
  When adding a pre-defined solution with the Wizard, Event24x7 adds a complete solution.

- Copy & Paste
  Two ways to open the Copy & paste option:
  - The Edit Bar at the right side
  - Selecting an object and right mouse click

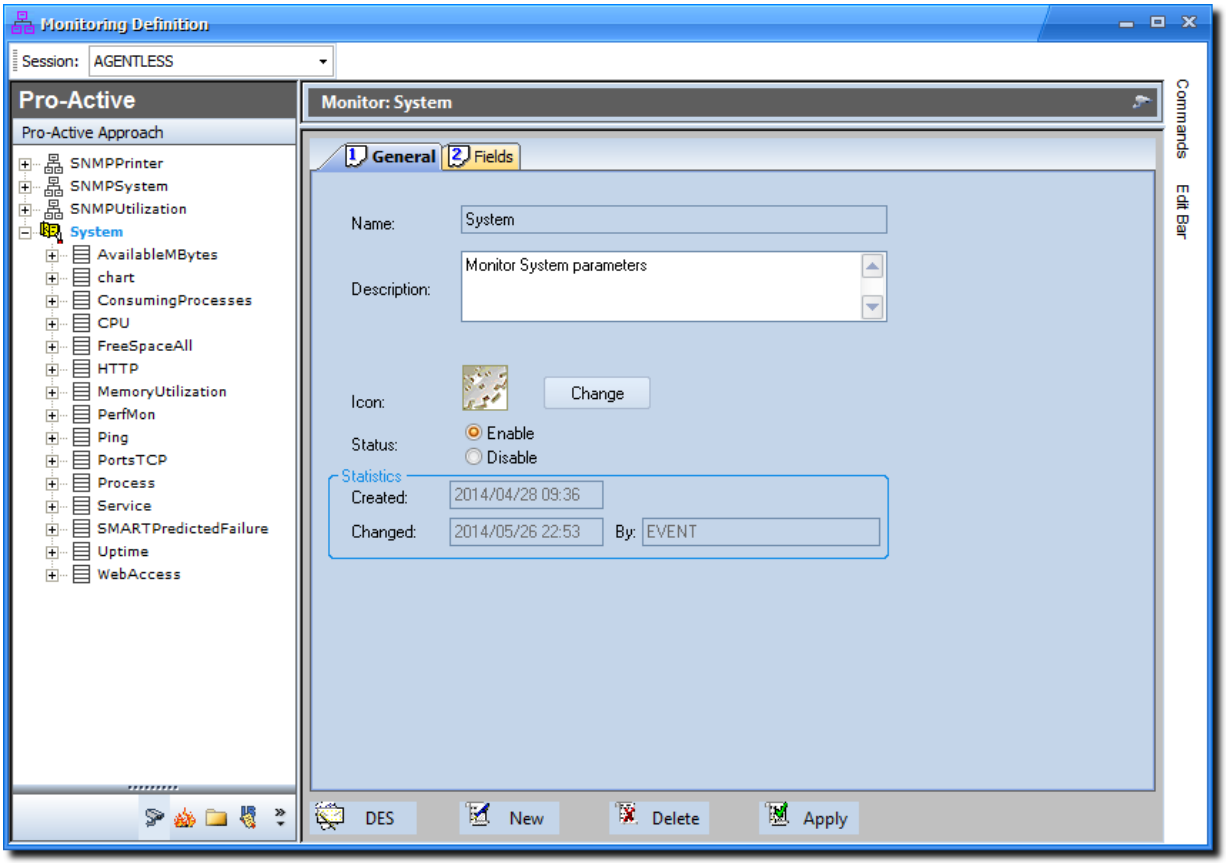
  You can select Copy for single object or Copy with an Object and its associates at the levels below.

- Paste from Skeleton
  It is possible to copy an object from the Skeleton definition window and paste it onto the appropriate level in the monitor definition window.

- Manually
  Open an object and type the **New** button.
  It will enable you to enter a new object name at the Name field. When you type Apply the new object will be created.

6.4 Monitor Definition

Monitor is a container of Parameters that logically handle the same target. For example, Monitor of Oracle will hold all the Parameters that cover all the Oracle activities.
A Monitor relates to a single session. Tab Performance at the session definition lets you set Monitors for the session.



The highlighted icon
Indicates Pro-Active.

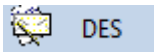
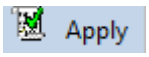
The Monitor screen has two parts:

- **Monitor List**
  The monitor list is located at the left pane of the screen and displayed in a tree structure. It contains the list of the all the defined Monitors organized by groups. A group is a logical unit sharing some common content for the monitors within this unit.

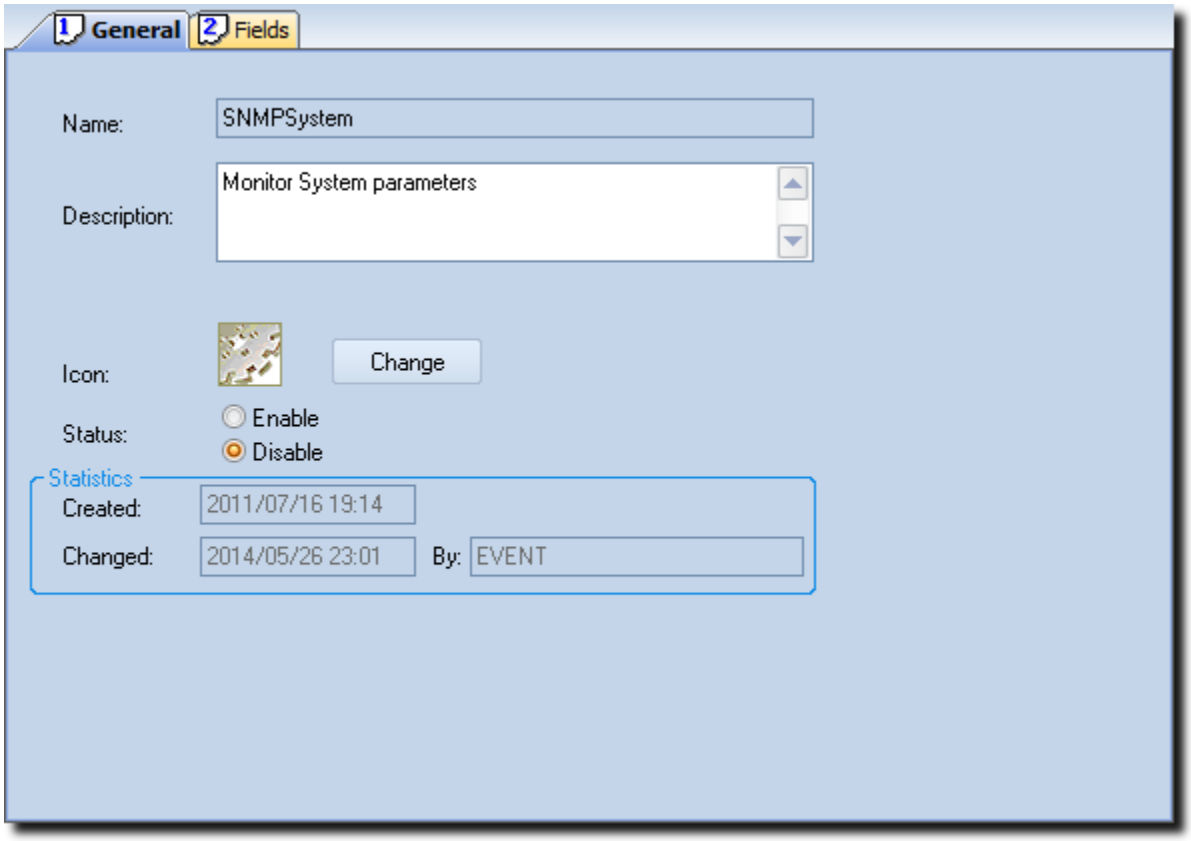
- **Definitions tabs**
  The monitor definition tabs are at the right side of the screen.

This section remains blank if you select a group from the Monitor List, but shows detail for a Monitor.

Monitor screen operation buttons

DES		Activates the selected monitor at the appropriate DES Server of the monitor's session and all the objects related to this monitor: Collectors and their Parameters. Event24x7 activates the monitors automatically when the session becomes active. When you change a monitor's definition and you want the changes to become effective immediately, the Activate button sends the newly defined monitor to the correct DES.
New		Add a new Monitor. Opens the definition tabs for entering a new monitor.
Delete		Delete the selected monitor.
Apply		Save last changes in the file.

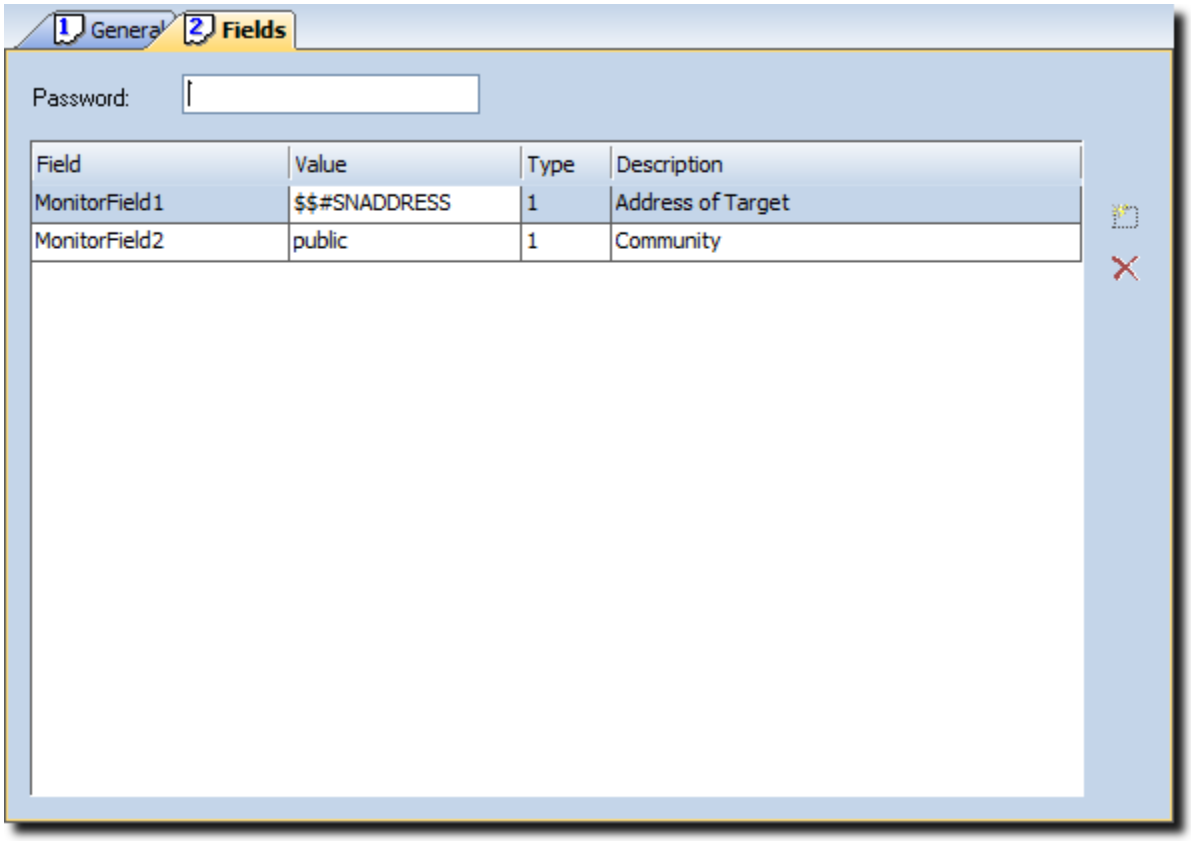
6.4.1 General Tab



Name	Unique identifier of the monitor
Description	User's description of the monitor. This specifies the monitor's target and any other information relating to the monitor. Used for documentation.
Icon	An Icon that represents the monitor in the Dashboard. The Dashboard is the screen that displays the monitors and their parameters that are currently active.
Status	Enable or Disable the monitor.
Created	Creation date of the monitor.

Changed	Date of last change.
By	Name of the user who made the last change.

6.4.2 Fields

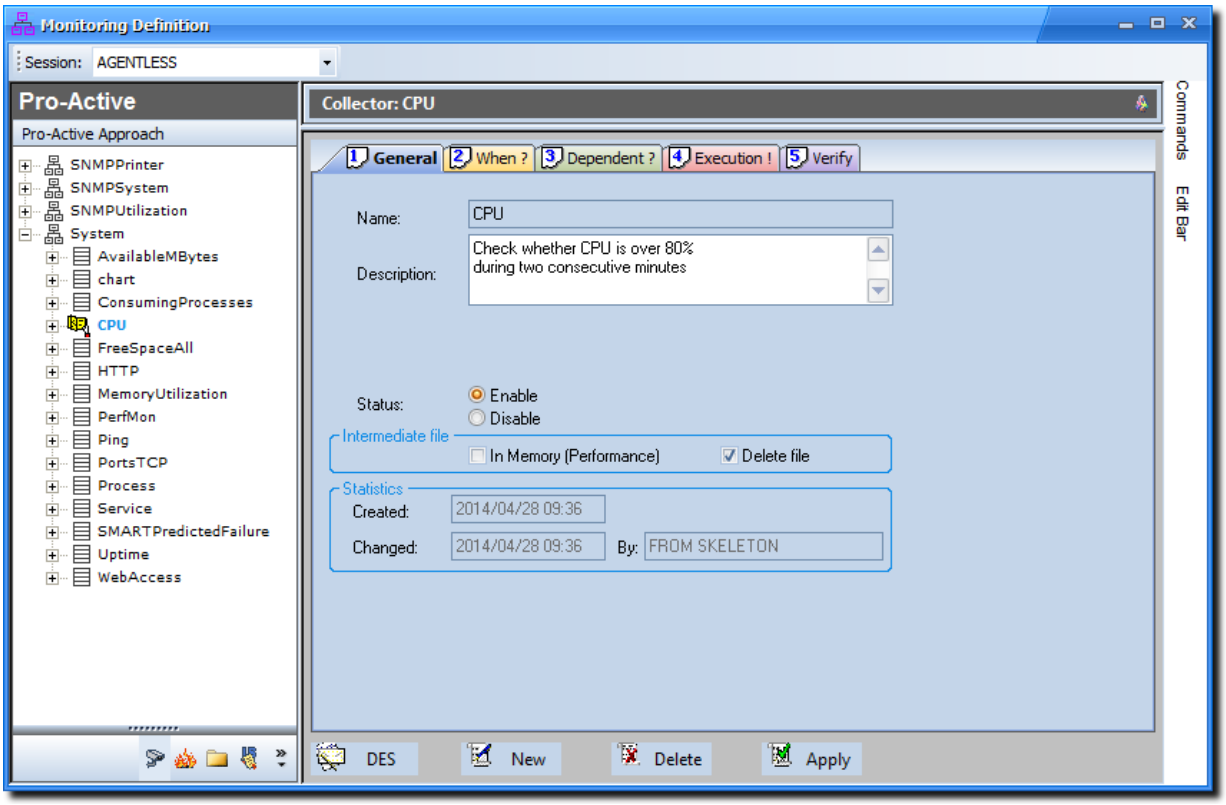


Upon selection of a pro-active monitor, the Monitor field's level is used by the Collector of the group to execute a query or command. When several Collectors need the same values for their activities, those fields are defined once at the Monitor level. The Runtime process passes these values to the Collectors.

For example, the Oracle monitor has several Collectors that access Oracle. The fields required to access the Oracle (OLEDB connection values) are defined at the monitor level.

6.5 Collector Definition

The Collector object executes a single command or request at the monitored environments. The result of the request is kept at a temporary file and is used later by the Parameter for its own calculations or checks.



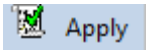
The highlighted icon
Indicates Pro-Active.

The Collector screen has two parts:

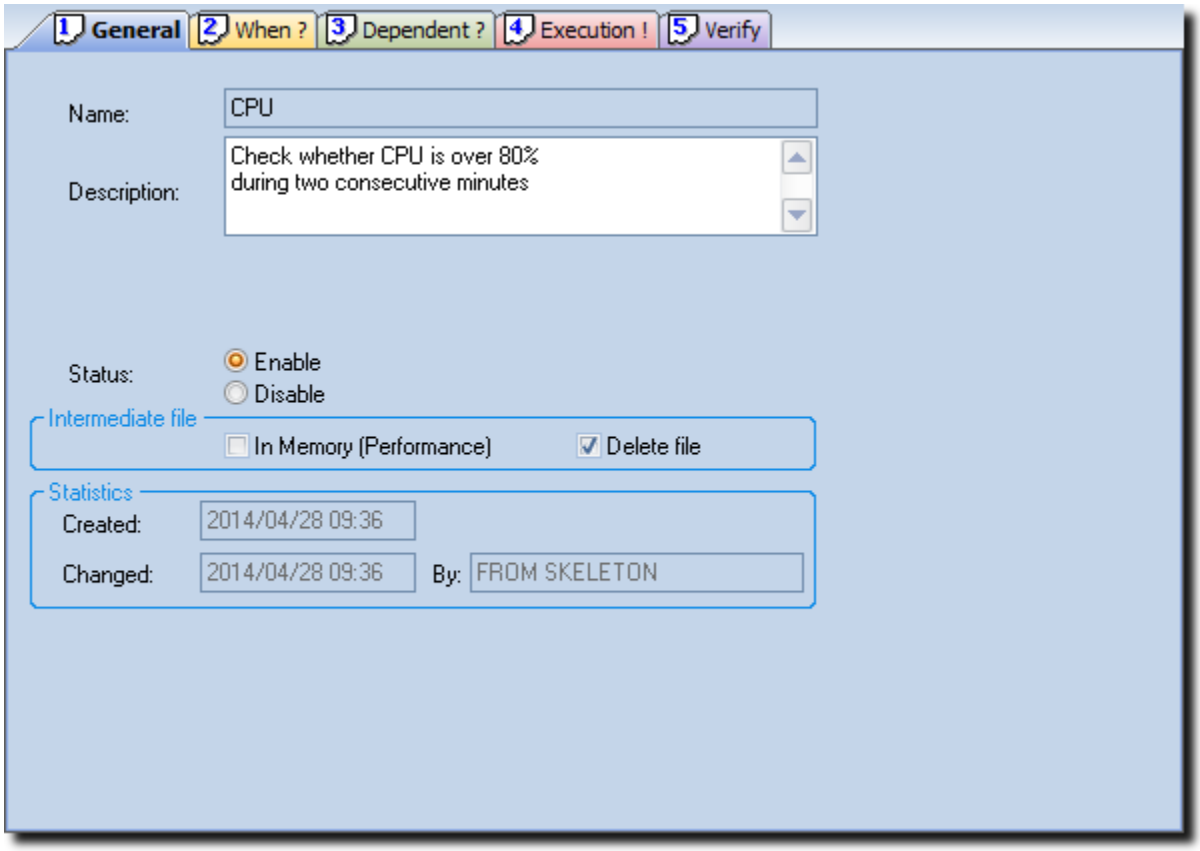
- **Collector List**
  The collector list which is located at the left pane of the screen and is displayed in a tree structure. It contains the list of all the defined Collectors organized by groups. A group is a logical unit sharing some common content for the collectors within this unit.

- **Definitions tabs**
  The collector definition tabs are at the right side of the screen.

Collector screen operation buttons

DES		Activate the selected collector at the appropriate DES Server of the monitor's session. Event24x7 activates the collectors automatically when a session becomes active. When you change a collector's definition and want the changes to be effective immediately, press this button and it will send the newly defined collector to the correct DES.
New		Add a new Collector. Opens the definition tabs for entering a new collector.
Delete		Delete the selected collector.
Apply		Save last changes in a file.

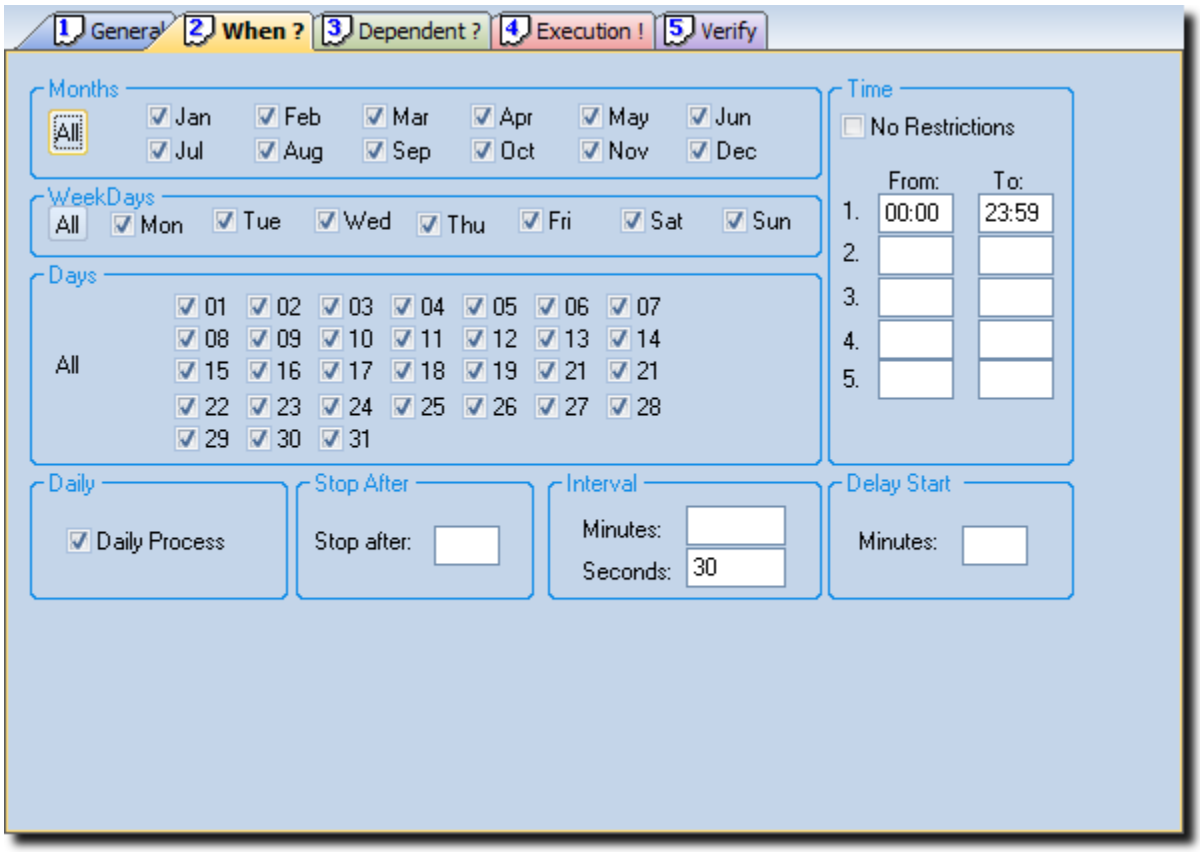
6.5.1 General Tab



Name	Unique identifier of a collector
Description	User's description of the collector. This specifies the collector target and any other information relating to the collector. Used for documentation
Status	Enable or Disable the collector
In Memory	Specify whether the intermediate result file of the collector will be held in memory. This increases performance by decreasing IO operations

Delete File	Specify whether the intermediate resulting file of the collector will be automatically deleted after it's been used. This is only valid when the **In Memory** option is off. For the debug process, you can leave this file and view it. The temporary files are kept in the directory: <DES installation directory>\Temp
Created	Creation date of the collector
Changed	Date of last change.
By	Name of the user who made the last change.

6.5.2 When?

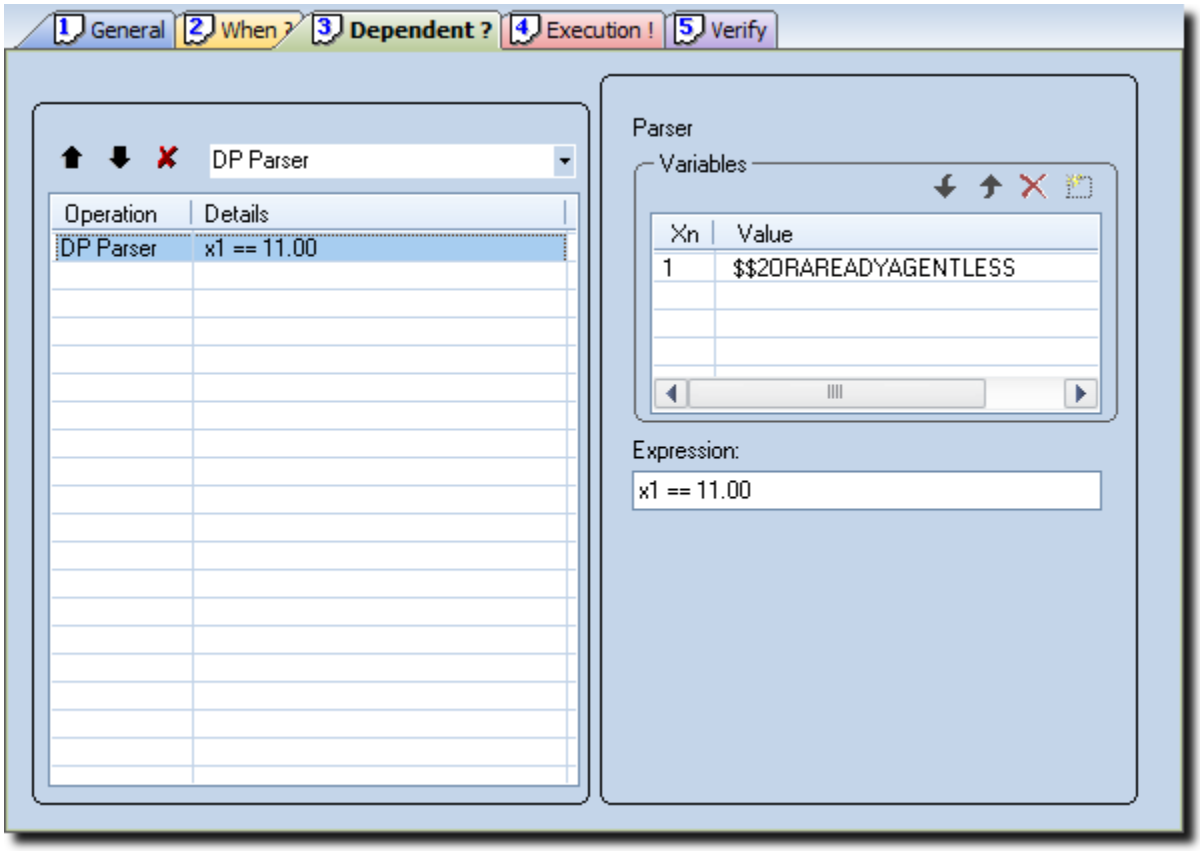


Define when to schedule the Collector. Fields have the same meaning as in the When? Rules tab.

The field “Stop After” has an important role of passing parameters to the collector when the connection is established.

6.5.3 Dependent ?

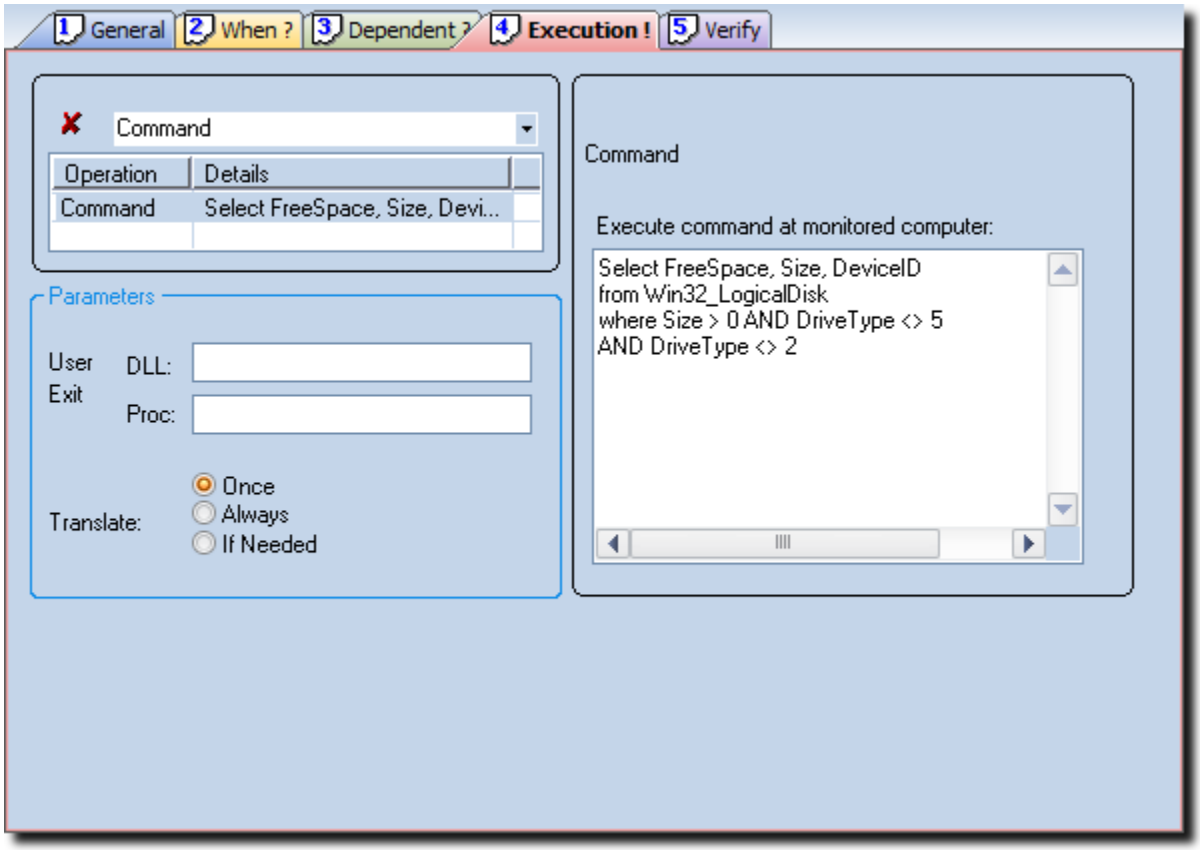
Define the pre-requisite conditions for the execution of this collector.



If conditions defined fail to exist on a cycle the collector will not execute.

6.5.4 Execution !

Define the single command or request that the Collector executes.



Fields

Activity — A pull down menu shows a list of available activities.

Force Cancel — Automatic problem solver.
When a collector remains in the Running state, this usually indicates a problem. If the collector is in the Running state more than the Force Cancel value, Event24x7 will restart the session.

Translate	Specify how to translate Event24x7 System variables. You have three options: **Once** - The search for system variables process occurs only once before the first execution of the collector. **Always** - The search for system variables process occurs every time prior to the collector execution. **If Needed** -Let Event24x7 determine the required approach.

Available actions:

Disable When?	Parameter value is provided from external
Empty	Let the Parameter execute the command based on IB.
ADSI Command	Use ADSI protocol (LDAP) to test the Active Directory
Bandwidth Utilization	Measure the bandwidth of current interface cards.
Command	Specify the command to execute
Command PsExec	Perform PsExec command.
Copy Parameter	Copy parameter and use any other existing parameter
CPU Usage	Used for Consuming Processes
Database	Request that address database (Oracle, SQL etc)
DES Command	Perform any command from DES PC
Exchange Inbox	Perform Exchange Inbox remote command
File	Perform file status or copy file to Parameter
File Size	For file size watch dog.
HTTP	Check availability of URL.
Performance Monitor	**P**erform perfmon counter.
Ping	Check access to a TCPIP address
Ports Scan	Check that selected Ports listening
PowerShell	Perform PowerShell command.
SNMP Get	Get OID object value from Mib.
SNMP Get List	Get List of OIDs from Mib.
SNMP Get Table	Get objects from Mib that have sequencers. Event24x7 displays the result in a tabular format.
Telnet	Perform telnet check
Use External	The collector value comes from an external source like Rule.
Windows Object	Easy check for Windows objects (Service, Process, Resource, etc).

Using Event24x7 Variable in Collector

When defining an activity for a Collector You can use Event24x7 System variables (prefix of $$#) and global User variables (prefix $$) in the request. See Special Variables section for more details.

When the Collector executes, it first checks whether the statement contains Event24x7 variables. If it does, it first changes each variable to the variable value and only then executes the action.

You can control this process via the Translate parameter.

6.5.4.1 Collector activities

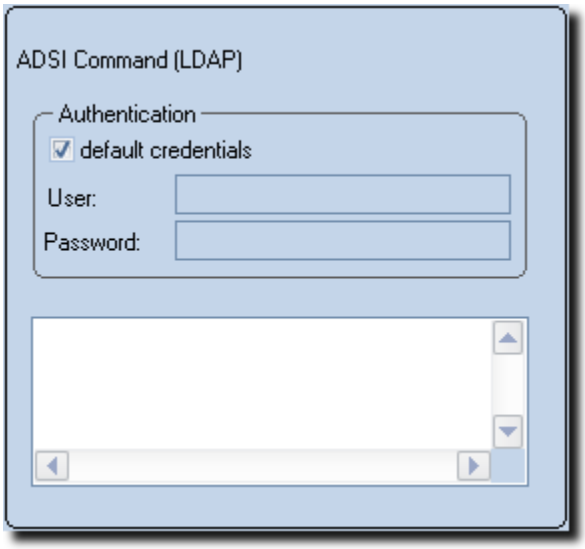
6.5.4.1.1 Disable When?

Specifies that the parameter will get its value from an external source and not from the collector. In this case the Collector When? Tab will become disabled and unused. Since there is no scheduler, the parameter will go into “sleep” mode until it will get a new value. Usually, the Parameter value is sent from a Rule or another Parameter.

6.5.4.1.2 Empty

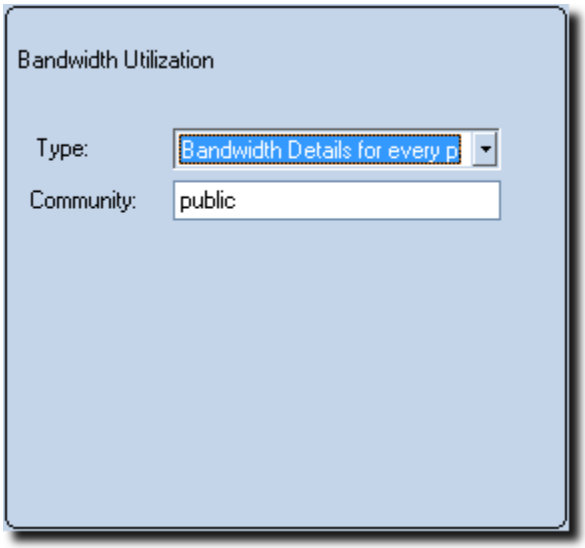
Specifies that the collector will not execute any command.
Retrieving the parameter value is done in the parameter itself.
This is valid in cases where you can take advantage of the IB commands. For example, to verify if a service is running you can execute a WMI command on the Win32_Services via the collector, or use an IB Service command. The IB encapsulates all the important resources of the Windows platform. The Performance component integrates and uses the power of the Rule engine.

6.5.4.1.3 ADSI Command



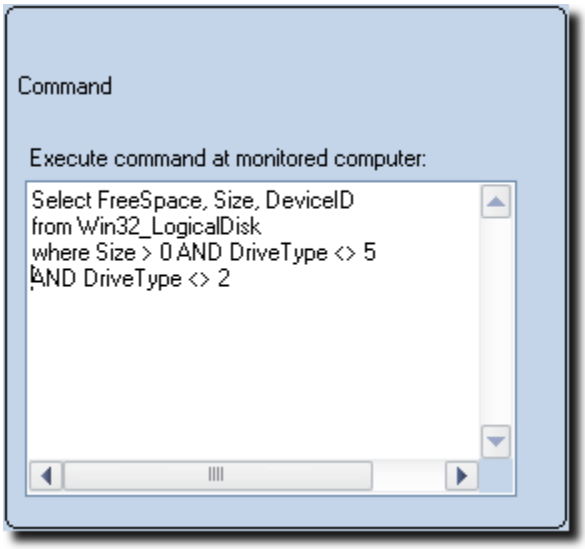
Specify ADSI command for a LDAP server.

6.5.4.1.4 Bandwidth Utilization



Specify Community for Bandwidth Utilization check.

6.5.4.1.5 Command

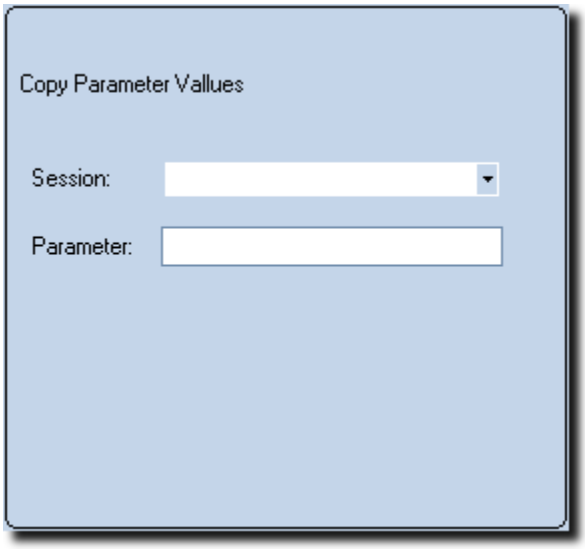


Specify command or request to execute.

The command's content should be adjusted to the target environment.
The above example shows a command to be executed at a managed Windows platform via WMI. For UNIX platform use UNIX command like sar.

Windows agent less (WMI) session can execute regular Windows command.
When the command prefix is "SYSTEM" the string following the "SYSTEM" would be executed as a Windows command.
For example, type "SYSTEM cmd /c netstat –e"

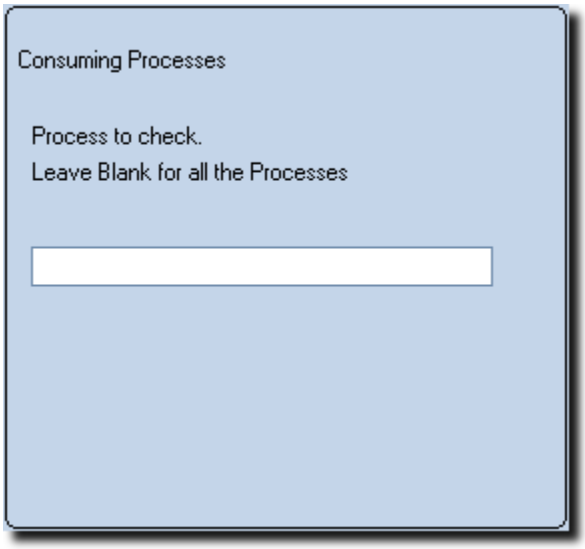
6.5.4.1.6 Copy Parameter



The collector takes the value of the existing parameter.

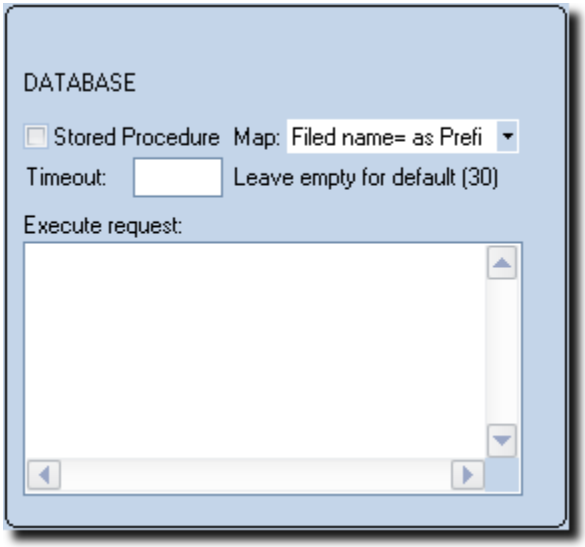
It is useful, for example, for creating Oracle statistics from any parameter. Inserting Oracle records should be done under the Oracle Monitor since it holds the Oracle connection type. The option allows taking the CPU value from any UNIX session and letting the Oracle monitor insert them into the Oracle database.

6.5.4.1.7 CPU Usage



Special command for Consuming Process check.
This check verifies whether there is a process that consumes too much CPU.
It is used by the ConsumingProcess check from the System solutions.

6.5.4.1.8 Database



Specify request from a Database.
The database type is determined in the Monitor fields. One of the fields is the OLADB string to open the database.

The output of the request has three possible formats:

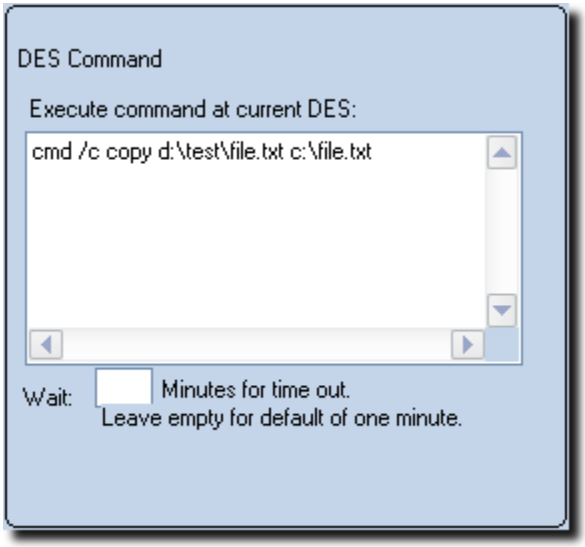
- Fixed column width when the “Fix length in table Format” option is checked.
  1 1
  2 2

- Prefix fields name when the "field name = as prefix" option is checked
  FLD1=1 FLD2=1
  FLD1=2 FLD2=2

- Single Blank between fields
  1 objext1
  2 object2

  This request automatically handles fields with embedded blanks.

6.5.4.1.9 DES Command

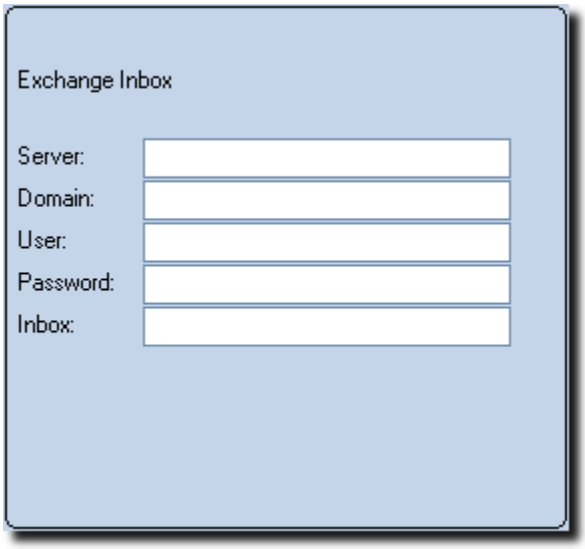

DES Command
Execute command at current DES:
cmd /c copy d:\test\file.txt c:\file.txt
Wait:
Minutes for time out.
Leave empty for default of one minute.

Performs any DOS command at the current DES server.

Wait field specifies the minutes Event24x7 will wait till the command ends. When the wait time is exceeded, Event24x7 will terminate the command.

6.5.4.1.10 Exchange Inbox

Monitor user mailbox at the Exchange Server.



The Inbox field is optional. The default value is **Inbox**.

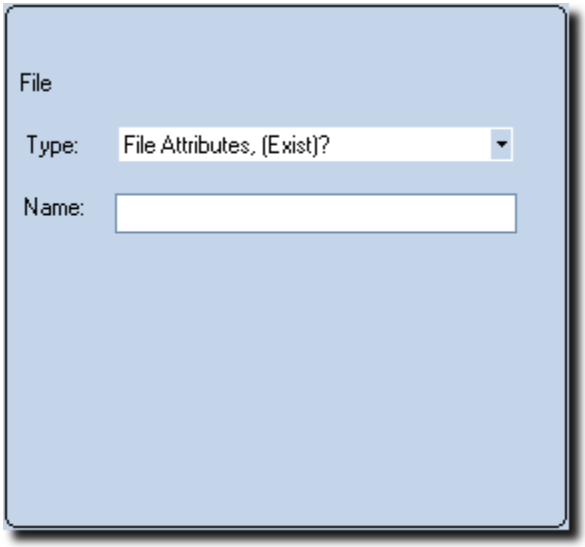
This option is in addition to Event24x7 capabilities to monitor the Exchange operations. The Exchange Inbox provides capabilities to monitor a single user's mailbox activities.

The result of this execution is a single line with three values:

- Number of items in the mailbox.
- Date of the first mail in the mailbox
- Date of the last mail in the mailbox.

This action is done remotely. No need to install anything at the Exchange Server itself.

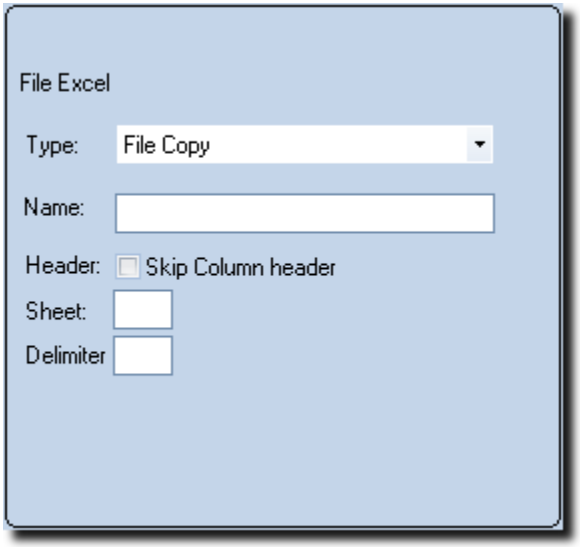
6.5.4.1.11 File



Handle file status.

Enable for checking file status or copy external file to be input for the Monitoring process.

6.5.4.1.12 File Excel

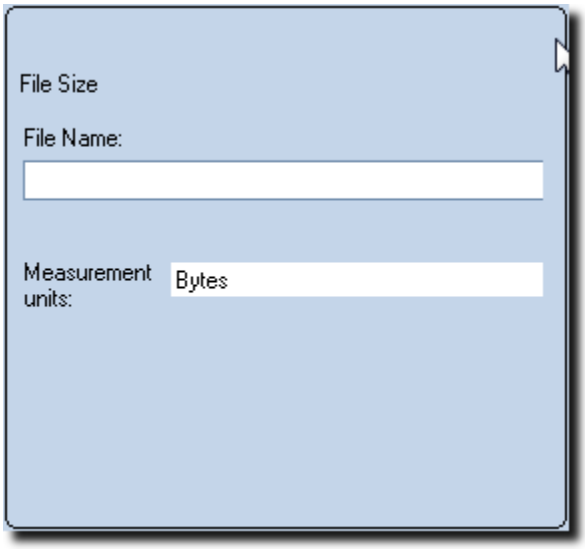


Handle Excel file status.

Enable for checking Excel file status, copy external Excel file to be input for the Monitoring process or delete an Excel file.

Type	Available options: • **File Attributes, (Exist)?** • **File Copy** • **File Delete**
Name	Full path and file name
Header	Check to skip column header
Sheet	Sheet number
Delimiter	Delimiter between fields

6.5.4.1.13 File Size

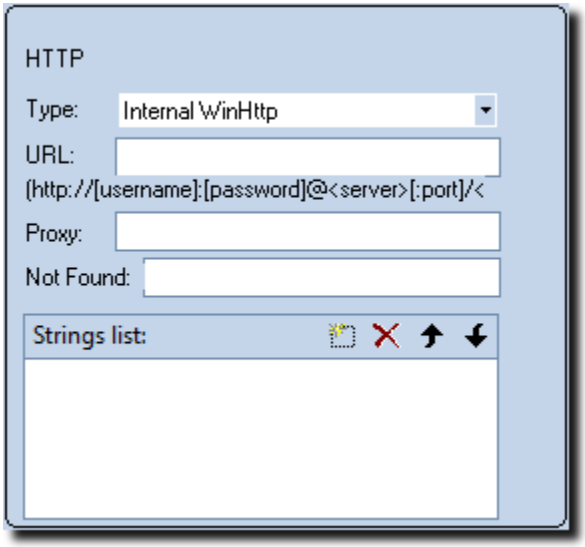


Bring the file size.
Measurement unit is one of the following:

Bytes
Kilobyte (KB)
Megabyte (MB)
Gigabyte (GB)

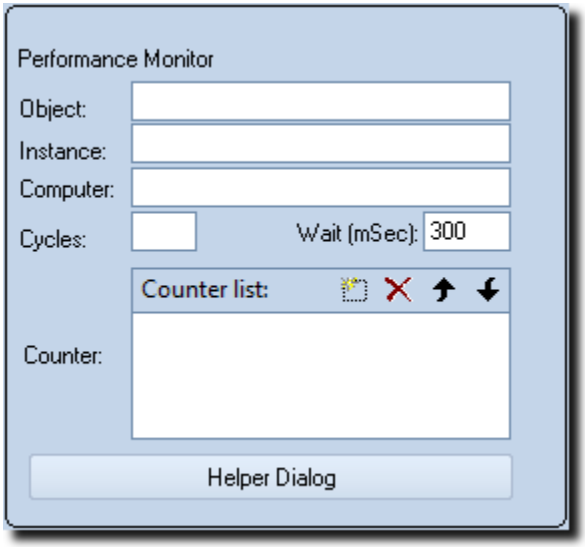
6.5.4.1.14 HTTP

Check if URL is accessed.



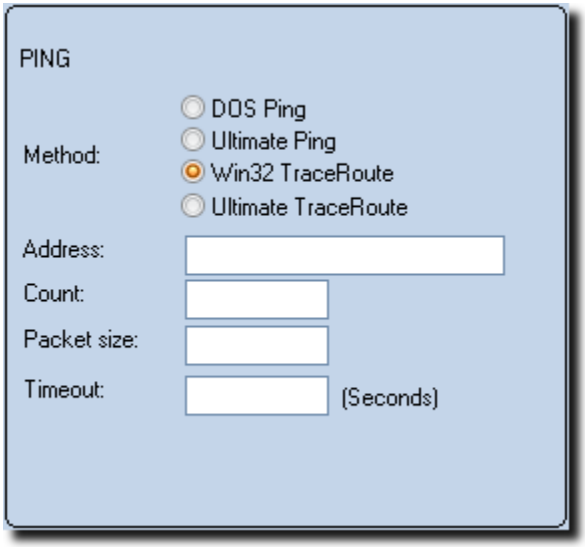
Type	Available options: • Internal WinHttp Event24x7 perform GET and POST commands internally. • External WGet.exe Event24x7 executes the WGet utility. All the WGet options are available
URL	URL to check or the command line for WGet
Proxy	Optional
Not Found	Not Found string that is returned from the web server. It enables Event24x7 to indicate a Not Found page
Strings List	Optional. List of strings to locate in the return answer from the web server. If this option is used, the last line of the intermediate file returned from the collector contains an indication if all strings were found. List line has the format of: >>Result: OK Size= 1

6.5.4.1.15 Performance Monitor



Perform perfmon counter.

6.5.4.1.16 Ping



Check if the TCPIP address is accessible.

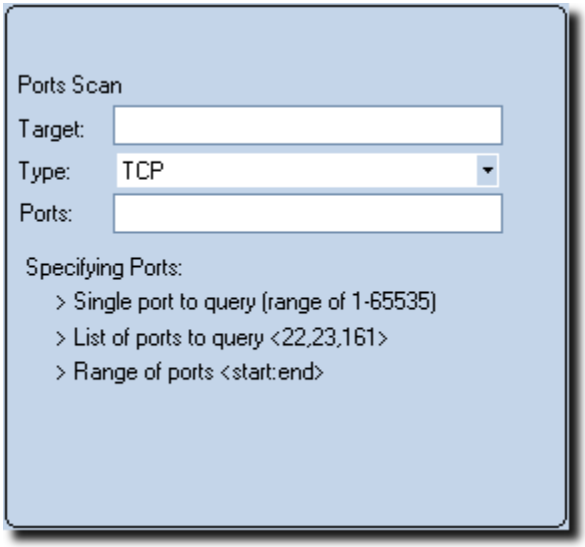
If the address in not accessible, the intermediate file will be written with the line:
Failed in ping specified host, GetLastError returns: 0

If the address is accessible, the intermediate file will be written with the line:
68.142.226.42 [p11.www.re2.yahoo.com], replied in RTT:268ms

Ping returns 0 upon success and -1 upon failure.

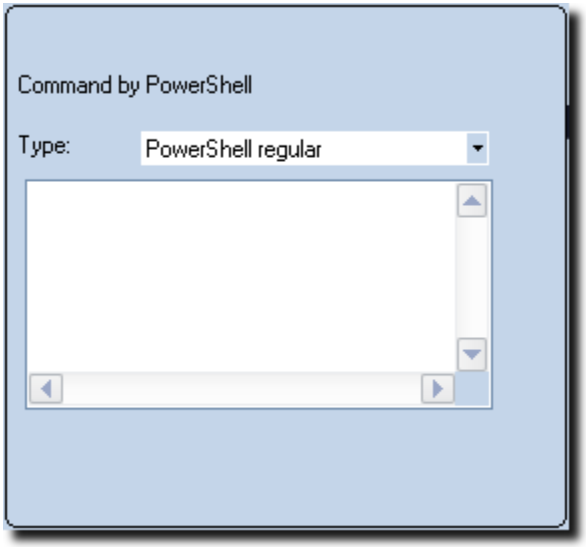
Trace Route returns the time it took the request to arrive at the target.

6.5.4.1.17 Ports Scan



Check if the Ports are in the Listening mode.

6.5.4.1.18 PowerShell



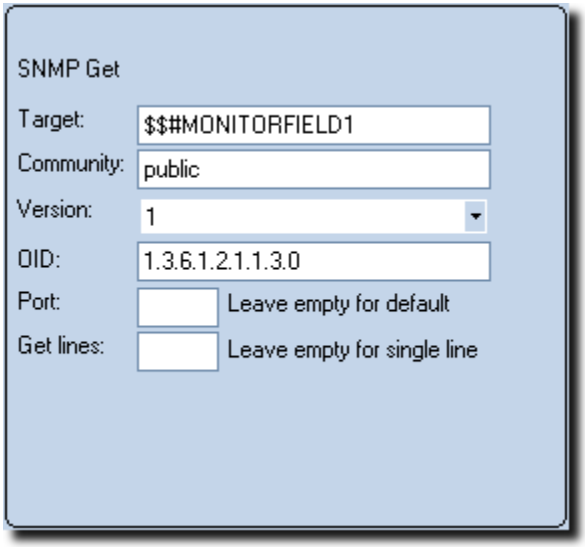
Perform the PowerShell support of Event24x7.

The support enable perform PowerShell command to the following components:

- Regular PowerShell commands.
- Exchange Management 2007
- Exchange Management 2010
- VMware

6.5.4.1.19 SNMP Get

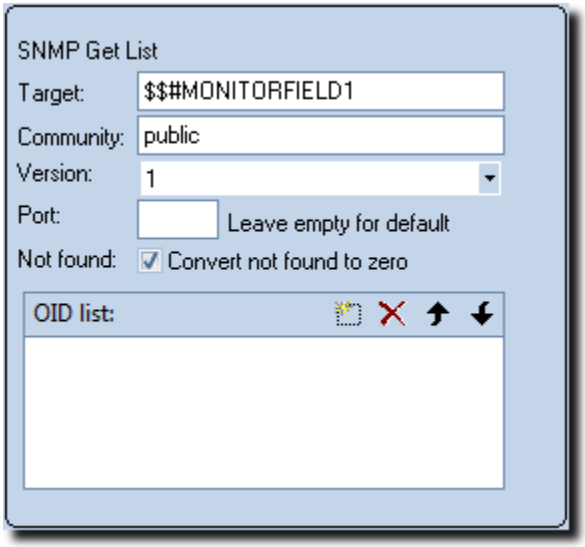
Get specific OID value.



Target	Target address. Can also be an Event24x7 variable that holds the target address
Community	Community
OID	OID to get its value
Get lines	Optional. Get more lines starting from the requested OID

6.5.4.1.20 SNMP Get List

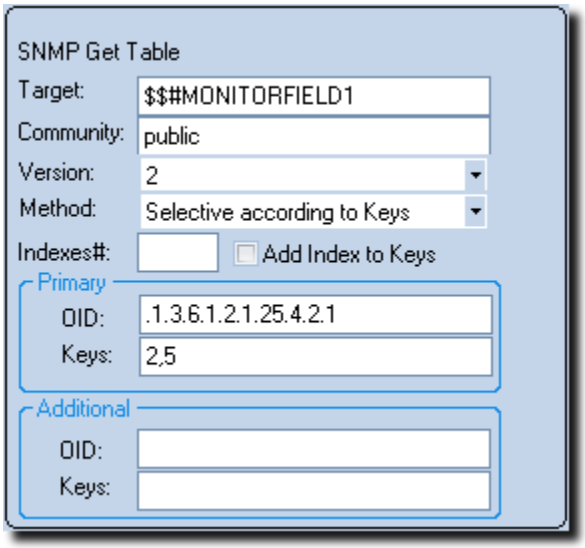
Get specific list of OIDs value.



Target	Target address. Can also be an Event24x7 variable that holds the target address
Community	Community
OID List	List of OIDs to get their values

6.5.4.1.21 SNMP Get Table

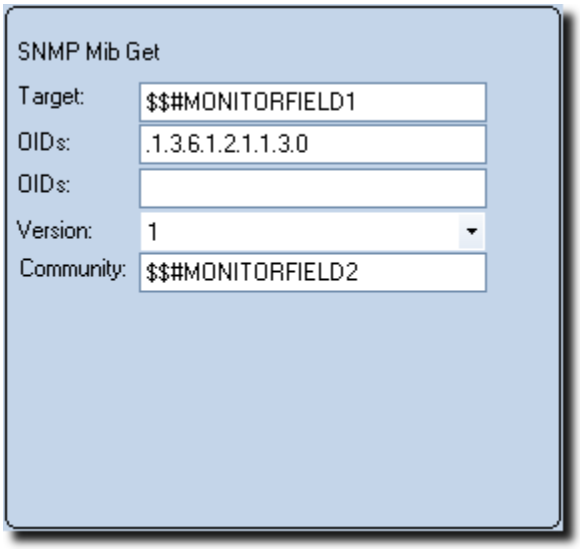
There are OIDs entries that have an internal table structure.
In the MIB it appears line after line. Event24x7 knows to read the values and list them in a tabular format.



Target	Target address. Can also be an Event24x7 variable that holds the target address
Community	Community
Indexes	Numbers of indexes that exist for the table
OID	OID to get its value
Key	Specify the keys you want to get their values

6.5.4.1.22 SNMP Mib Get (New SNMP Engine)

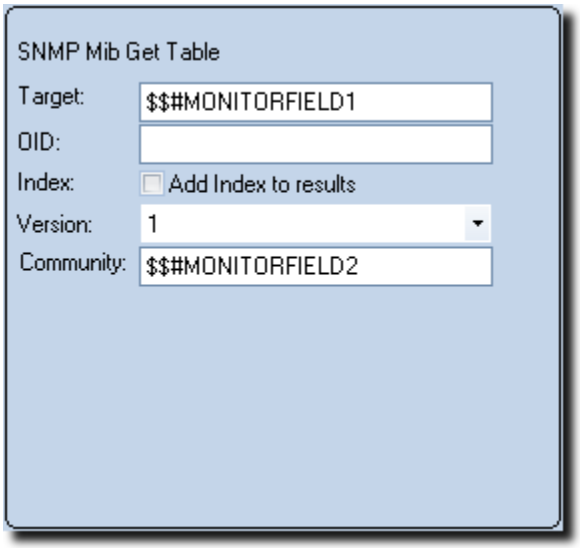
Get specific OID value.



Target	Target address. Can also be an Event24x7 variable that holds the target address
OID	OID to get its value (2 fields)
Version	SNMP version (1, 2c or 3)
Community	Community
EngineId	
Username	
Auth Password	
Enc Password	

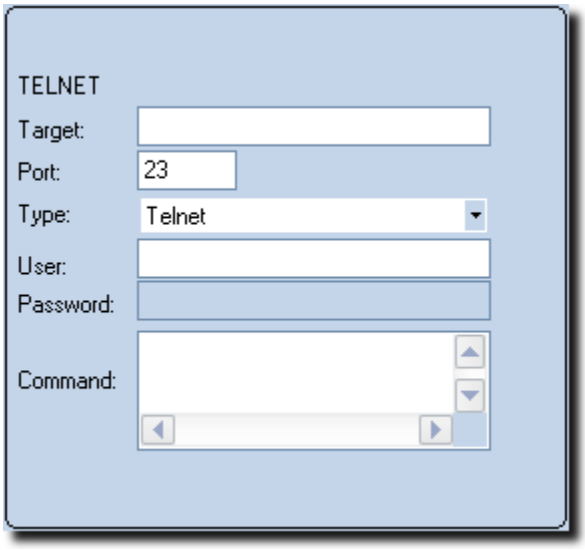
6.5.4.1.23 SNMP Mib Get Table (New SNMP Engine)

There are OIDs entries that have an internal table structure.
In the MIB it appears line after line. Event24x7 knows to read the values and list them in a tabular format.



Target	Target address. Can also be an Event24x7 variable that holds the target address
OID	OID to get its value (2 fields)
Index	Check to add index field to the results
Version	SNMP version (1, 2c or 3)
Community	Community
EngineId	
Username	
Auth Password	
Enc Password	

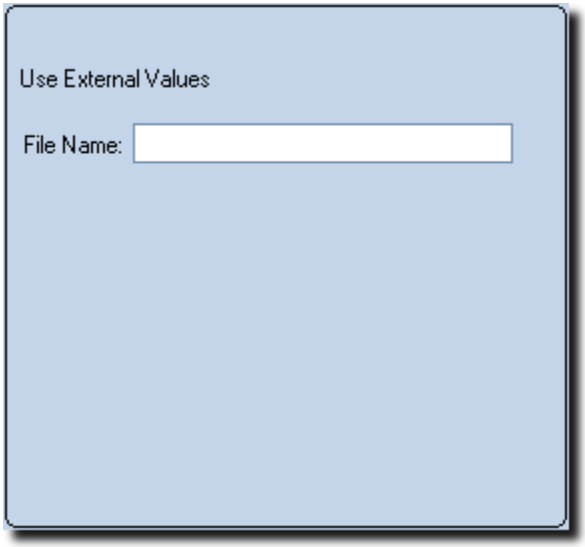
Telnet



Check Telnet connection to Host.

Can be used to check if SMTP (port 25) is open.

6.5.4.1.24 Use External



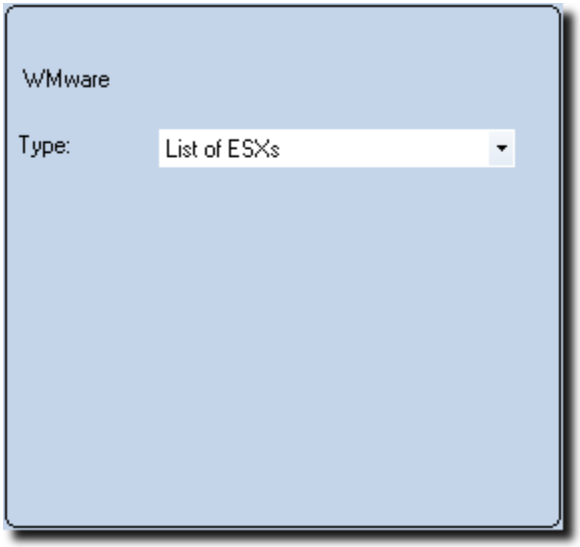
Instruct collector to take values created by an external application.

Usually a collector performs an operation to get the object value. In some cases we need to use values created by Rules with "Server Parameter" command.

6.5.4.1.25 VMware ESX

Get information from a VMware server

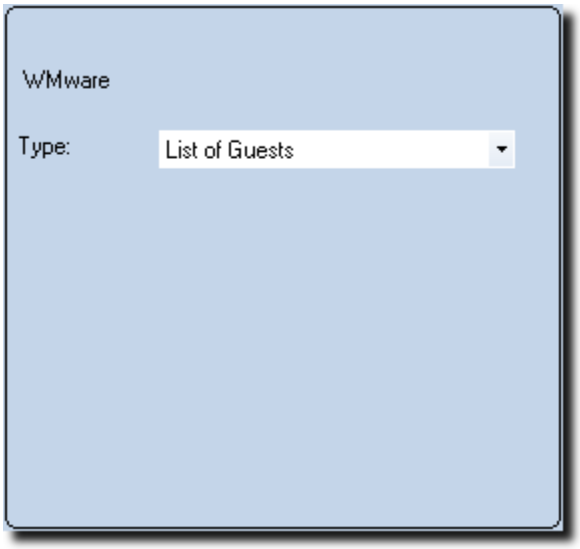
6.5.4.1.25.1 List of ESXs



Get a list of all ESXs from a VMware vCenter.

Type	List of ESXs

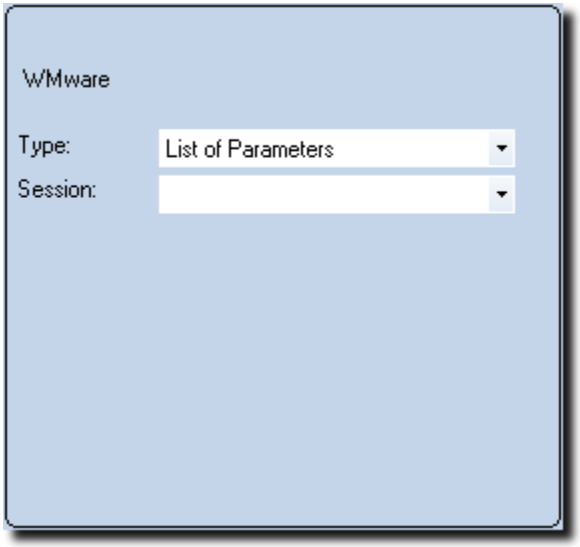
6.5.4.1.25.2 List of Guests



Get a list of all VM guests from an ESX server.

Type	List of Guests

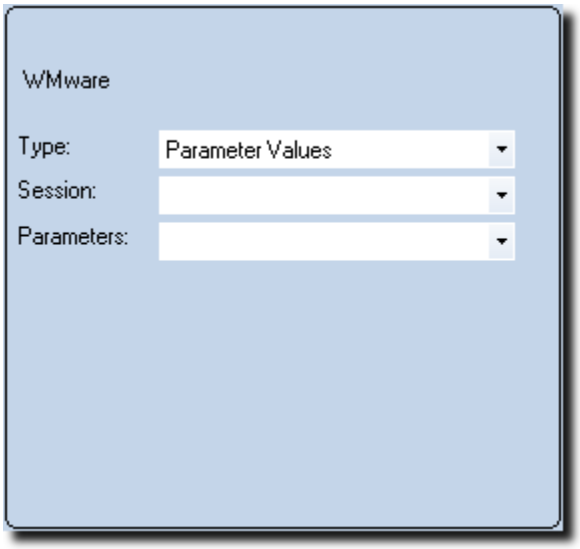
6.5.4.1.25.3 List of Parameters



Get a list of all parameters that can be queried from a VM guest.

Type	List of Parametrers
Session	VM session to get the parameter's list from

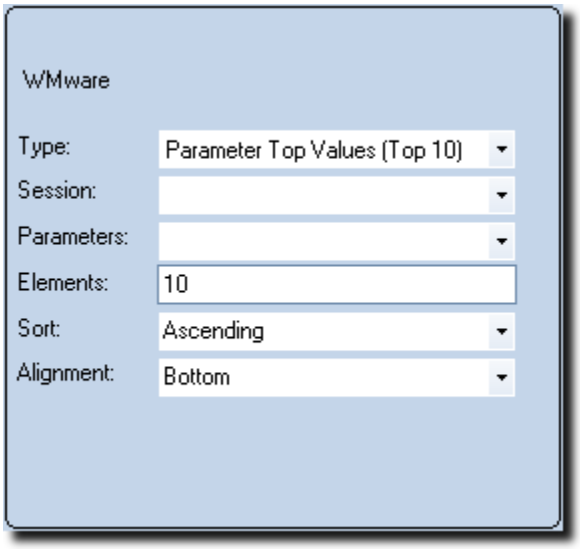
6.5.4.1.25.4 Parameter Values



Get parameter values from a single VM guest.

Type	Parameter Values
Session	VM session to get the parameter values from
Parameter	Parameter's name

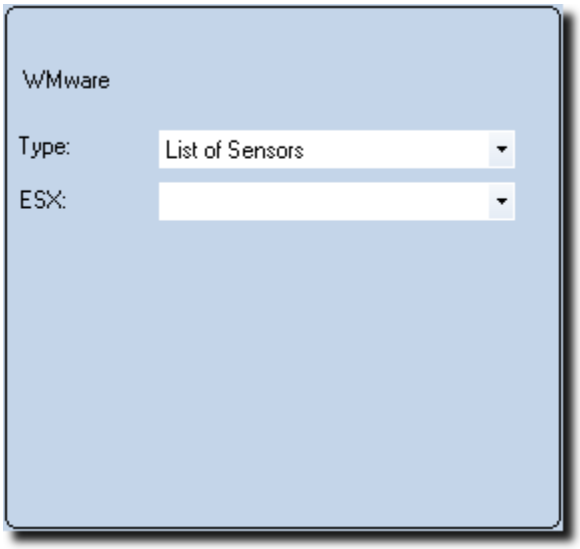
6.5.4.1.25.5 Parameter Top Values (Top 10)



Get Top 10 values of a parameter from all VM guests.

Type	Parameter Top Values (Top 10)
Session	VM session to get the parameter values from
Parameter	Parameter's name
Elements	Number of top elements
Sort	Ascending or Descending
Alignment	Bottom or Top

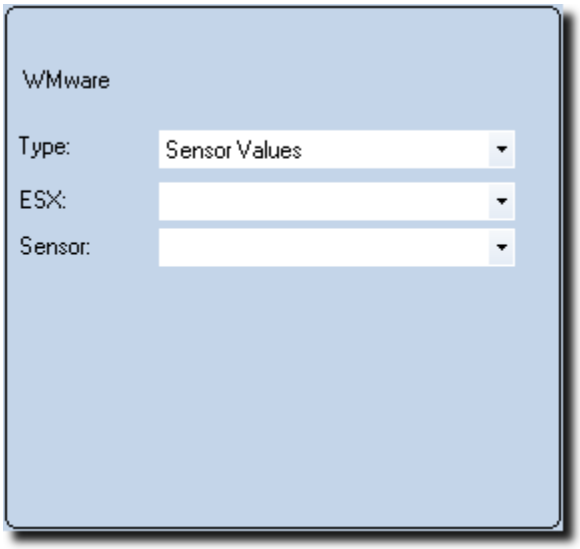
6.5.4.1.25.6 List of Sensors



Get a list of sensors from a single ESX server.

Type	List of sensors
ESX	ESX to get the sensors from

6.5.4.1.25.7 Sensor Values

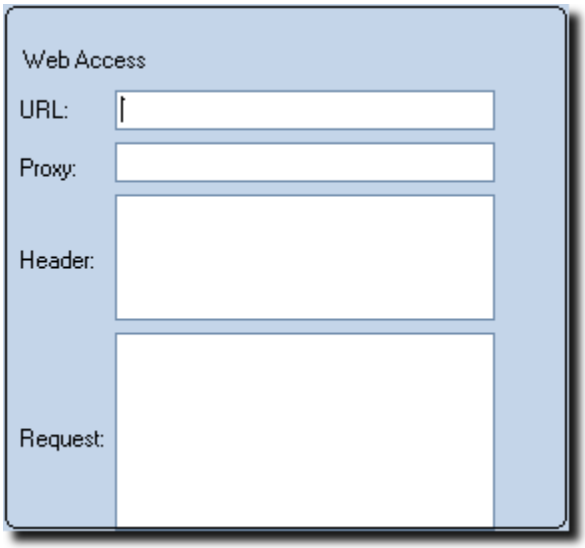


Get value of a sensor from a single ESX server.

Type	Sensor Values
ESX	ESX to get sensor's value from
Sensor	Sensor's name

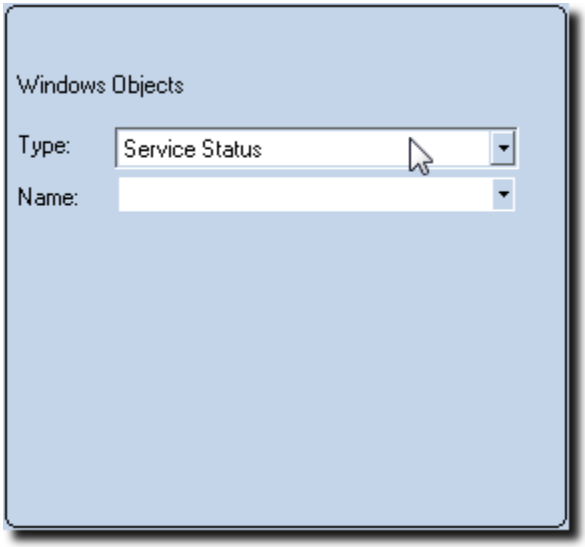
6.5.4.1.26 Web Access

Send data to a URL address.



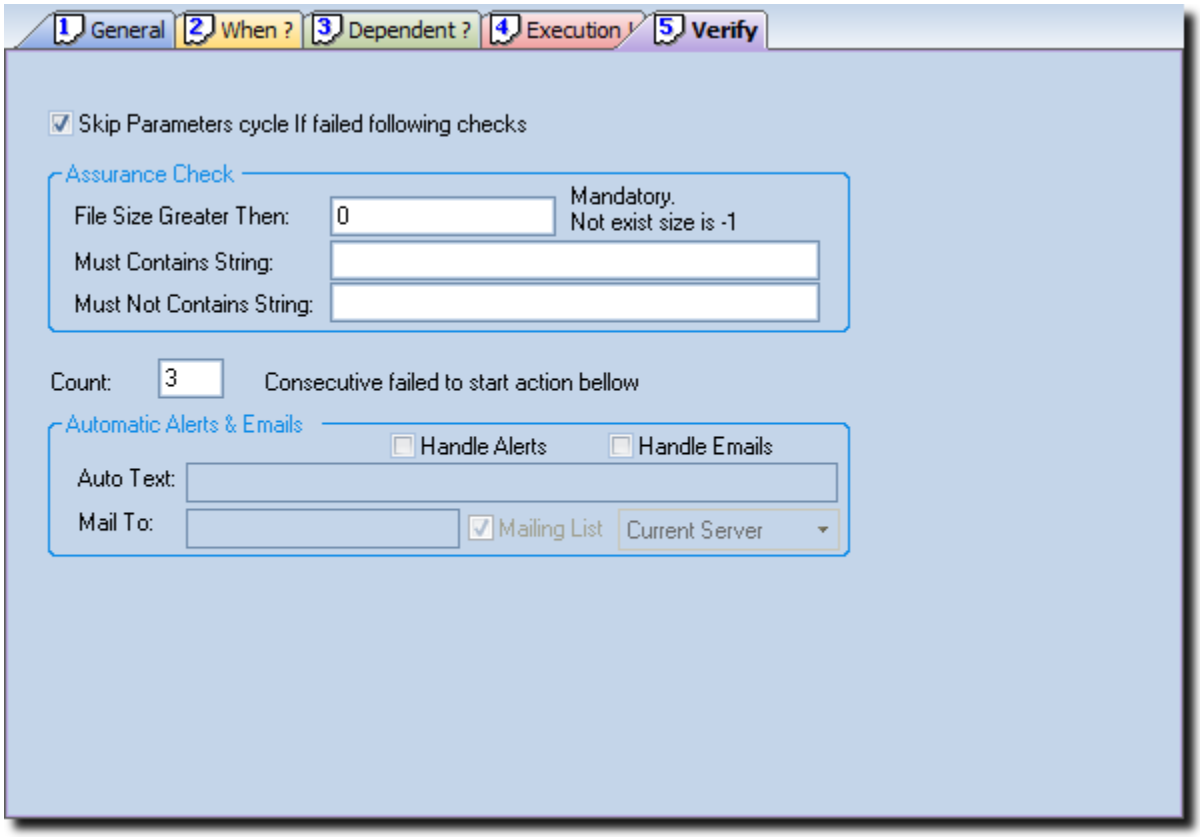
URL	Target URL address
Proxy	Proxy server address
Header	Package header
Request	Package body

6.5.4.1.27 Windows Object



Easy way to check Windows objects (Service, Process, Resource, etc).

6.5.5 Verify Tab

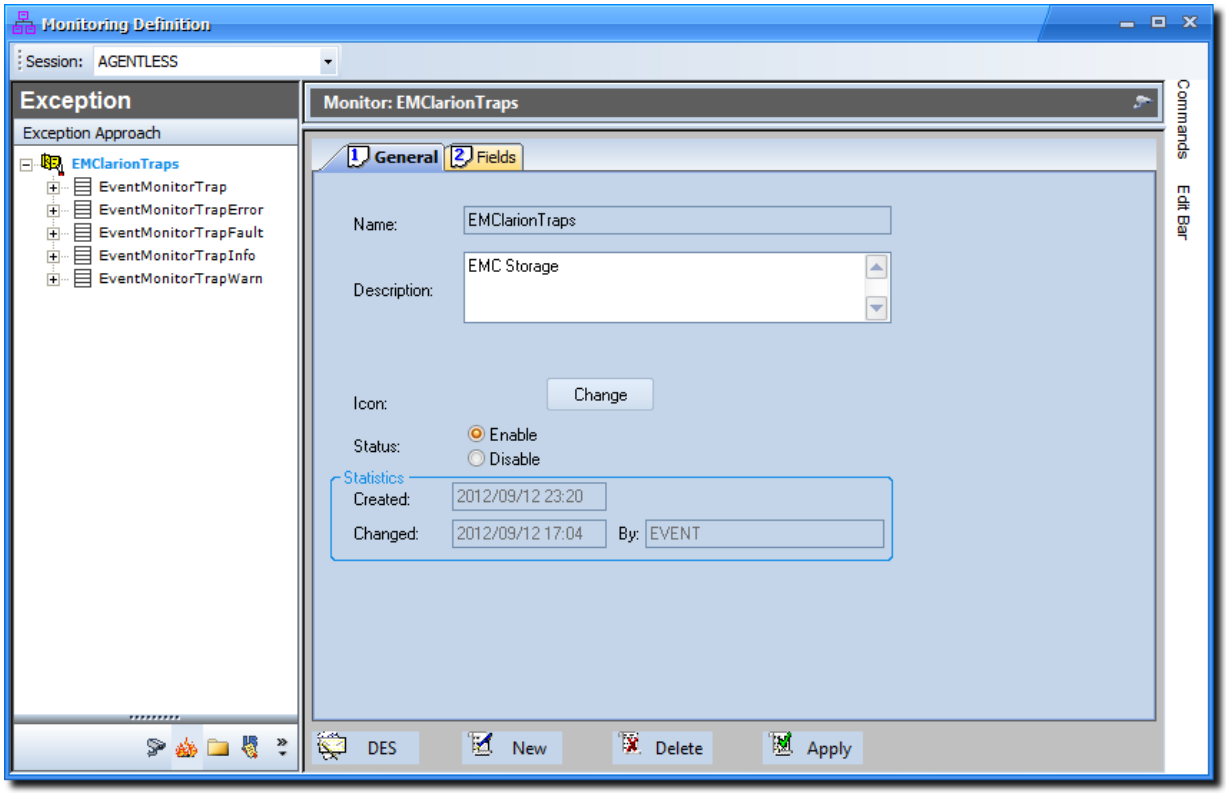


Optionally verify that the Collector's output is valid. If failed, Event24x7 will not perform the related parameters.

Skip Parameters cycle if failed following checks	Turn on the Verify check.
File Size Greater Then	Check the size of the Collector temporary file output.
Must Contain String	Check for the appearance of a specific string in the Collector temporary file output.
Must Not Contain String	Check that a specific string is not part of the Collector temporary file output.
Count	Minimum number of consecutive failures that must occur in order to trigger the execution of the automatic Alerts and Emails section.

6.6 Interceptor Definition

The Interceptor object executes a single command or request at the monitored environments. The result of the request is kept at a temporary file and is used later by the Parameter for its own calculations or checks. The main activities of an interceptor are to intercept specific strings in files, SNMP strings or traps that arrive at the current session and specific Information Base Objects (processes, services, WMI commands, PerfMon objects and so forth).



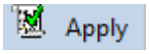
The highlighted icon
Indicates Exception Monitor.

The Interceptor screen has two parts:

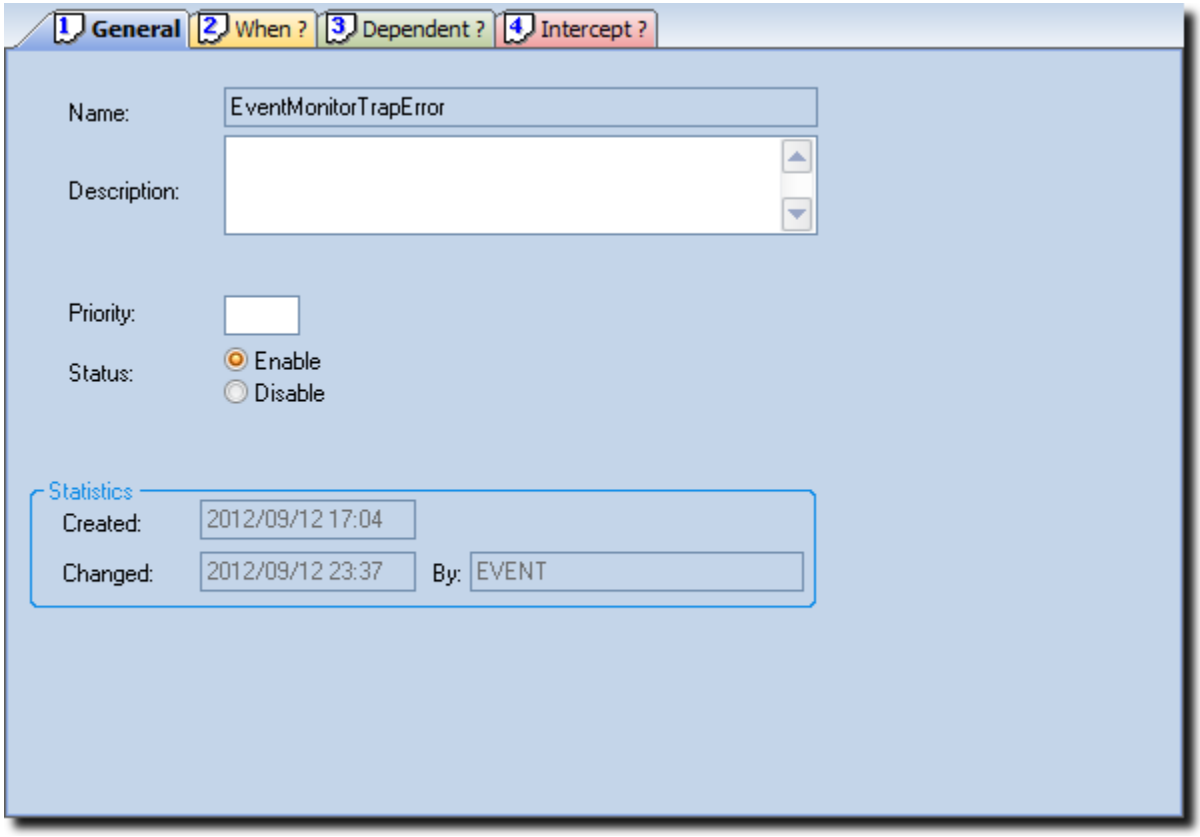
- **Interceptor List**
  The interceptor list which is located at the left pane of the screen and is displayed in a tree structure. It contains the list of all the defined Interceptors organized by groups. A group is a logical unit sharing some common content for the interceptors within this unit.

- **Definitions tabs**
  The monitor definition tabs are at the right side of the screen.
  This section remains blank if you select a group from the Monitor List, but shows detail for an interceptor.

Interceptor screen operation buttons

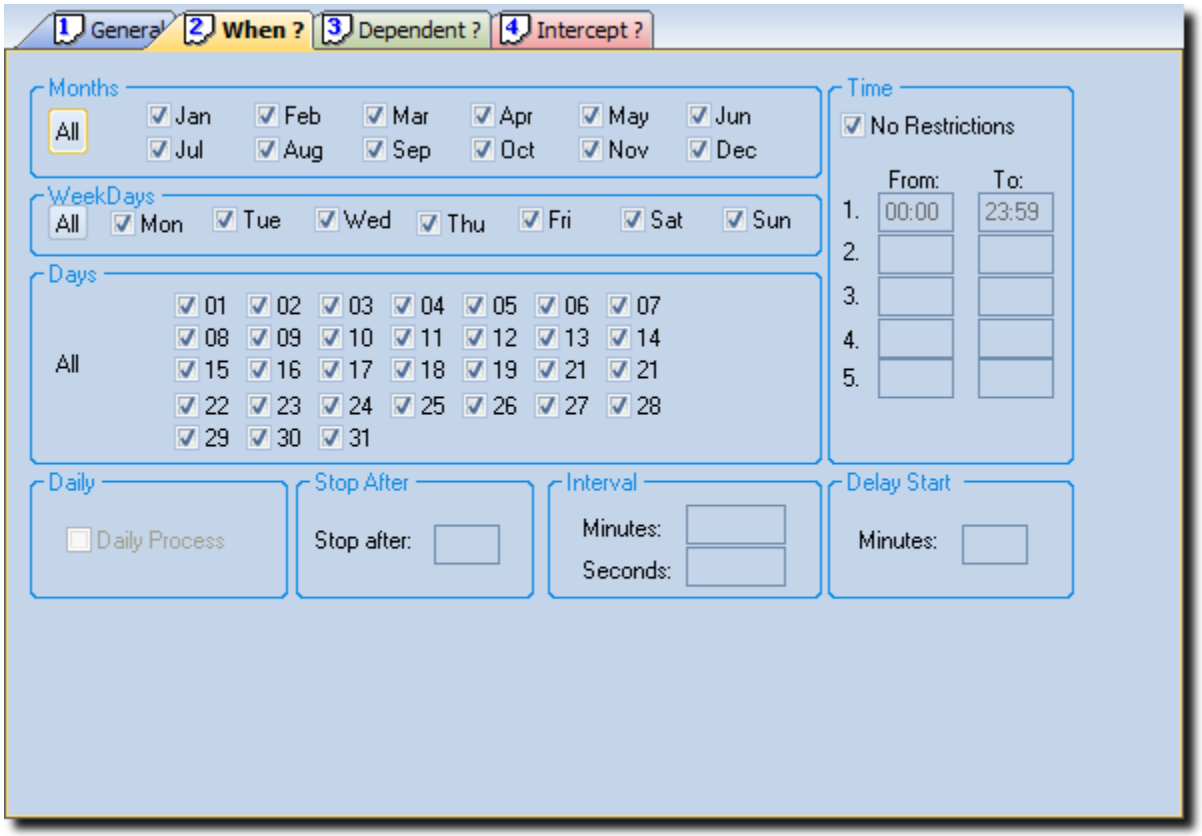
DES		Activate the selected interceptor at the appropriate DES Server of the monitor's session. Event24x7 activates the interceptors automatically when a session becomes active. When you change an interceptor's definition and want the changes to be effective immediately, press this button and it will send the newly defined interceptor to the correct DES.
New		Add a new Interceptor. Opens the definition tabs for entering a new interceptor.
Delete		Delete the selected interceptor.
Apply		Save last changes in a file.

6.6.1 General Tab



Name	Unique identifier of the interceptor.
Description	User's description of the interceptor . Used for documentation.
Status	Enable or Disable the interceptor.
Created	Creation date of the interceptor.
Changed	Date of last change.
By	Name of the user who made the last change.

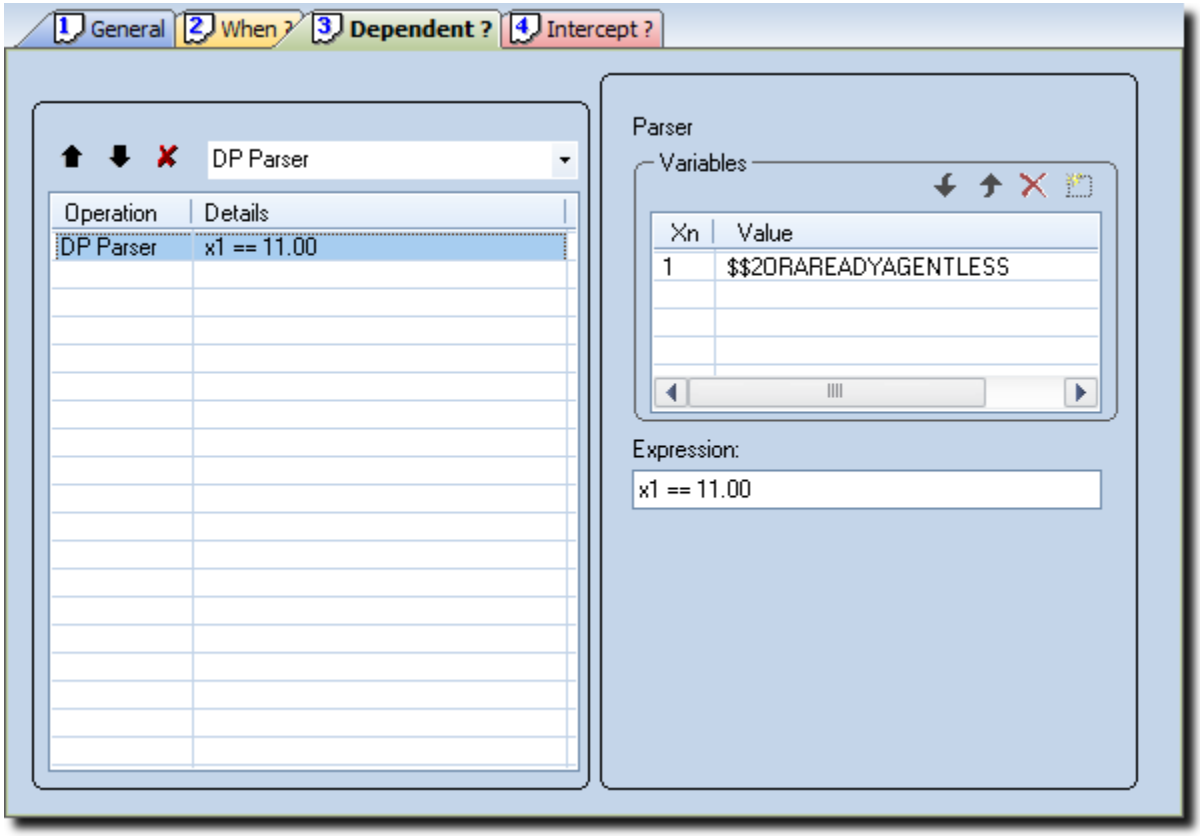
6.6.2 When? Tab



Note: This tab is of no relevance when working with interceptors because unlike Collectors which conduct their tests in a cyclic manner every time interval, these tests are not self-initiated but only take place when data is written into a file.

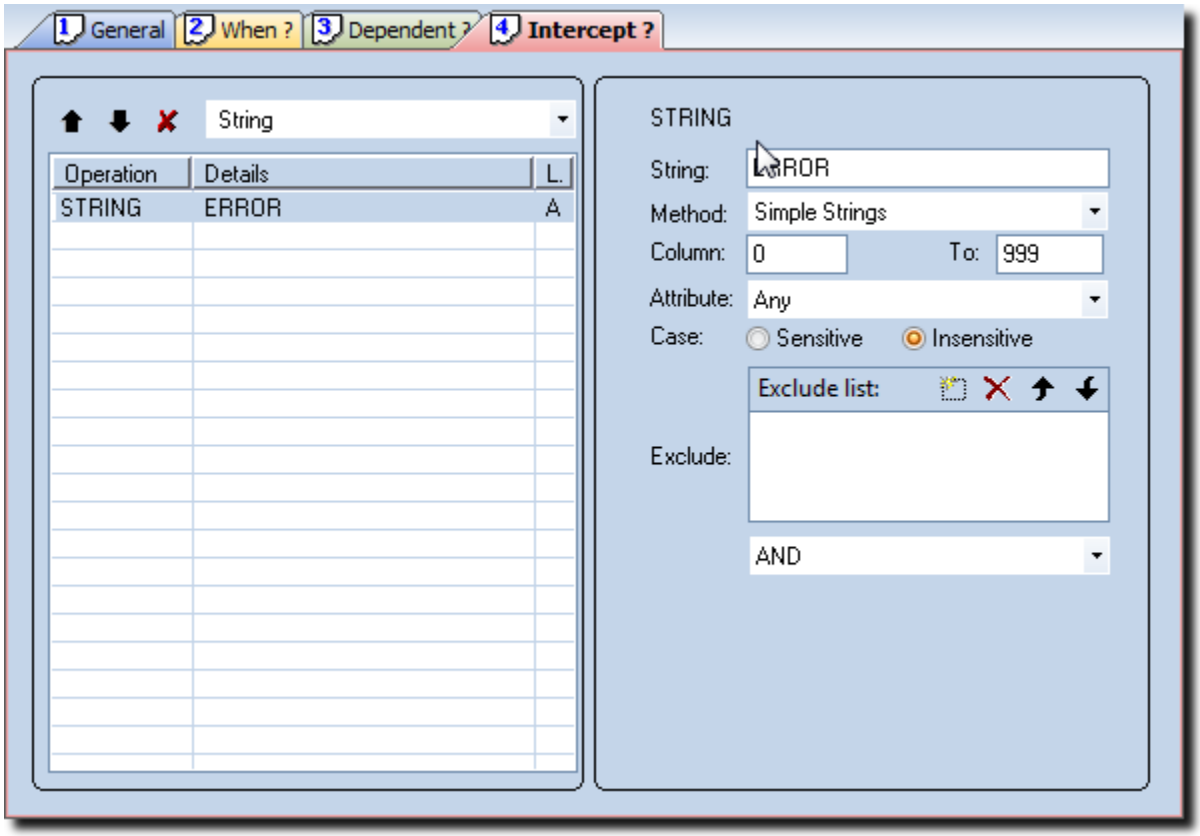
6.6.3 Dependent? Tab

Define the pre-requisite conditions for the execution of this collector.



If conditions defined fail to exist on a cycle the collector will not execute.

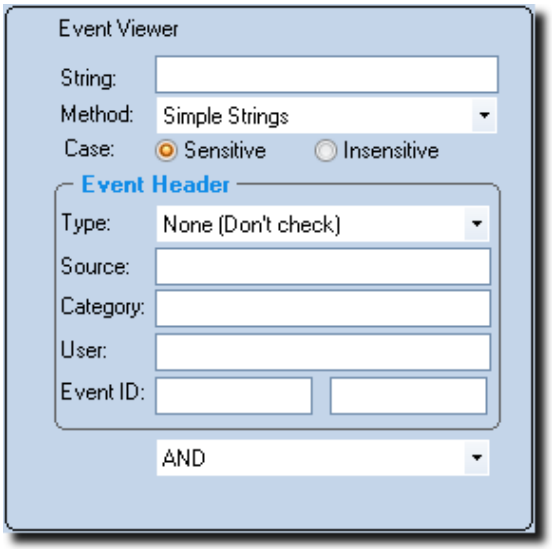
6.6.4 Intercept? Tab



Only one field is relevant in this tab and it is the activity to perform. It is selected from a pull down menu with the following options:

Event viewer
Identify
Information Base (IB)
Snmp
String
User Experience

6.6.4.1 Event Viewer



Purpose	Perform an action based upon a specific string that appears in the incoming Event Viewer message or according to the header of the message.	
Fields	**String**	String to search
	Method	Method to use for finding the string: • Simple string search • Using wildcard search with '?' and '*' in pattern. '*' means any characters and '?' means a single character.
	Case	Whether the search is sensitive to upper-case or lower-case letters.
	Type	Search only logs of this type for the above string. Possible types are: **None** (Don't Check), **Error**, **Warning**, **Information**, **Failure** and **Success**.
	Source	Search for a specific Source from the header
	Category	Search for a specific Category
	User	Search for a specific User name
	Event ID	Search for a specific Event ID. You can specify up to two Event IDs in a single request.

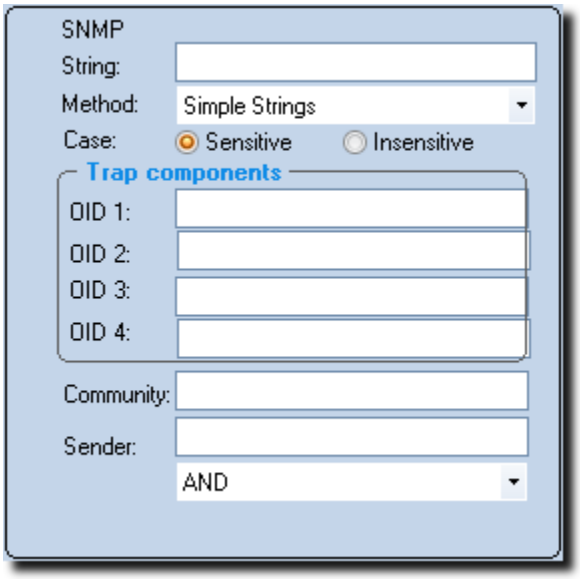
6.6.4.2 Identify

Purpose	Perform action "based upon the Message ID part of the incoming message.	
Fields	**Identify**	Message ID of the message. Field is in Alphanumeric format. Wildcard (* and ?) can be used.
	Attribute	Attribute of the message. Available options: **Any** **Normal** **High Intensity**
Details	**Identify** enables an Interceptor to be triggered by specific messages based on their Message ID. Message ID is valid only when the target session has a Message ID. For example: MVS, AS400.	
Example	**Identify IEF*** Every message id that has an IEF prefix.	

6.6.4.3 Information Base (IB)

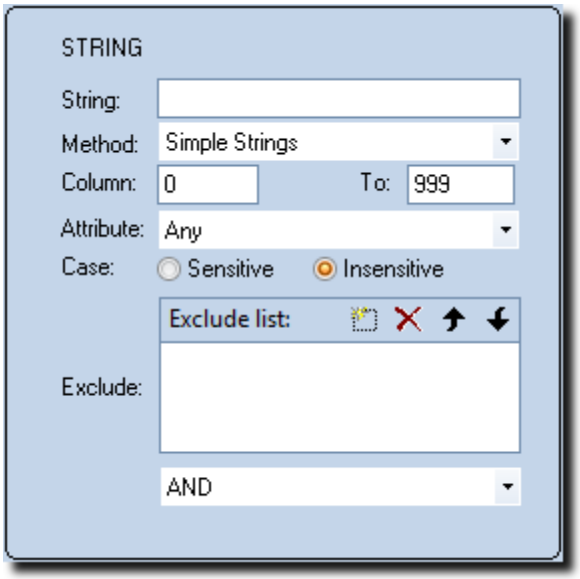
For each type of Information Base, the information base Interceptor intercepts a specific value when this Information Base is being checked. Thus in order for the interceptor to do this, this Information Base has to be defined in The IBs definitions under the same session.
The following IB Types are available, requiring you to fill in for each type the relevant object, names or values you want intercepted:

6.6.4.4 SNMP



Purpose	Intercepts a specific SNMP Trap that appears in the incoming message.	
Fields	**String**	String to search
	Method	Method to use for finding the string: • Simple string search • Using wildcard search with '?' and '*' in pattern. '*' means any characters and '?' means a single character.
	Case	Whether the search is sensitive to upper and lower case.
	OID 1-4	For MIB Snmp checks, the content of the first OIDs are in the mib.
	Community	Community of the SNMP trap.
	Sender	Sender's IP address.

6.6.4.5 String



Purpose	Intercepts a specific string only if it exists in one of the blocks written to the files watched by the **File Watch Monitor**.	
Fields	**String**	String to search
	Method	Method to use for finding the string: • Simple string search • Using wildcard search with '?' and '*' in the pattern. '*' means any characters and '?' means a single character.
	Column	Starting column. The searched string must start from this position.
	To	Ending column.
	Attribute	Attribute of the message. Available options: **Any** **Normal** **High Intensity**

Case	Whether the search is sensitive to upper and lower case.
Exclude List	A list of strings that must be ignored, i.e. if a written block containing the string above is found it should be also checked for the strings in this list. If at least one of them is also found in the written block, then the block should be ignored.

Details

A written block is intercepted only when a specific string appears inside this block and other strings (if they exist in the Exclude List) do not appear.

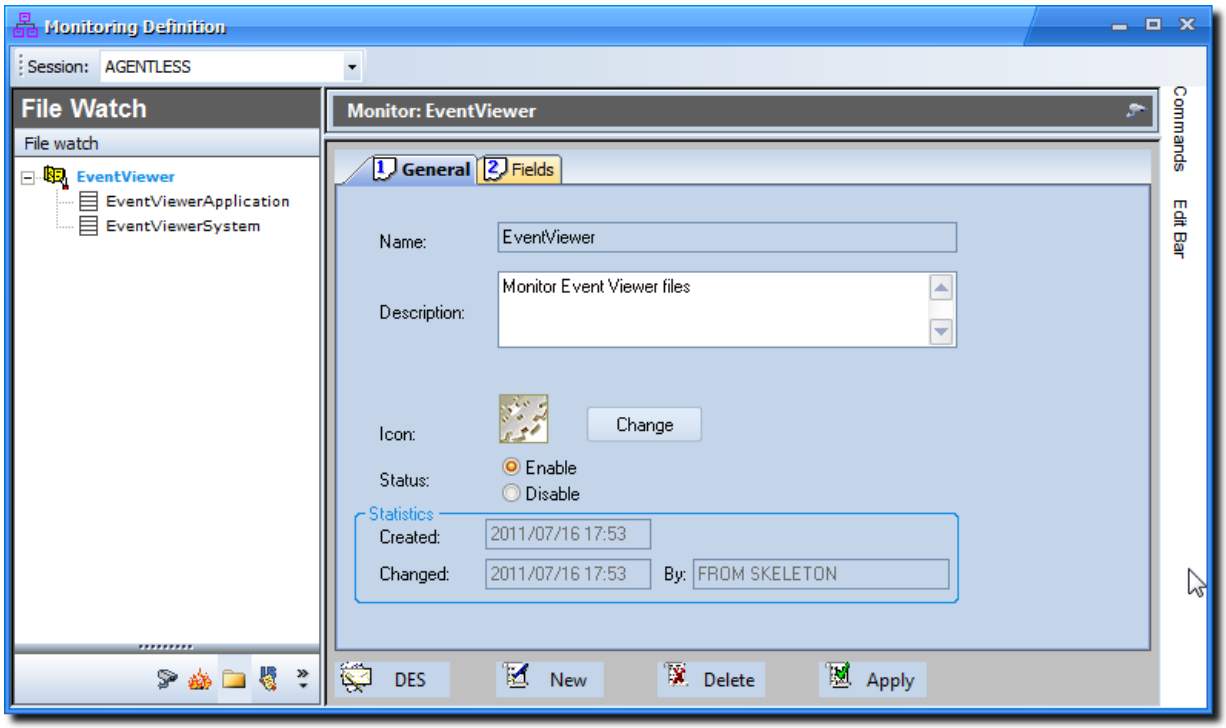
Please note that using the Wildcard search overrides the use of Columns and Case sensitive.

6.6.4.6 User Experience

Purpose	Intercepts a specific User Experience output file after each User Experience cycle.	
Fields	**Name**	The name of the User Experience Definition object.
Details	User Experience enables an Interceptor to be triggered by the output of a specific User Experience object, based on its name.	

6.7 File Watch Definition

The File Watch object's main responsibility is to track a list of user log files or event viewer logs for any new written information. Here you define the exact names and location of the files you want to monitor and every time new data is written to any one of them, this data is written on the focal point and transferred to the Interceptor for further processing.



The highlighted icon
Indicates File Watch Monitor.

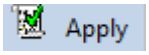
The FileWatch screen has two parts:

- **FileWatch List**
  The filewatch list which is located at the left pane of the screen and is displayed in a tree structure. It contains the list of all the defined file watch monitors organized by groups. A group is a logical unit sharing some common content for the file watch monitors within this unit.

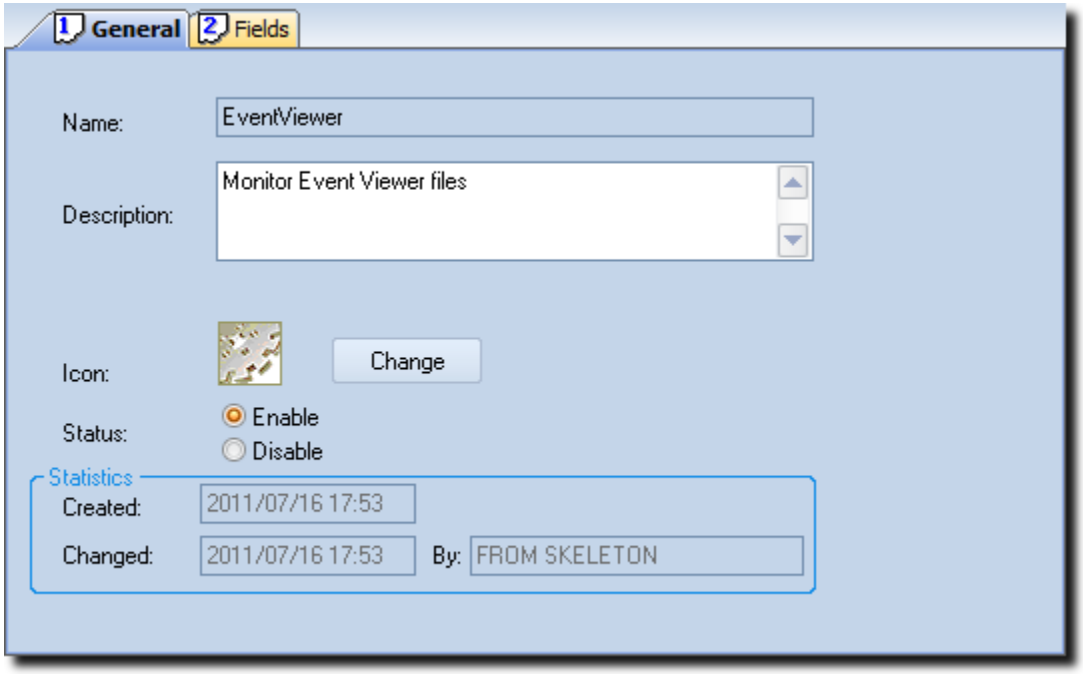
- **Definitions tabs**
  The file watch monitor definition tabs are at the right side of the screen.

This section remains blank if you select a group from the Monitor List, but shows detail for each file watch monitor.

File Watch monitor screen operation buttons

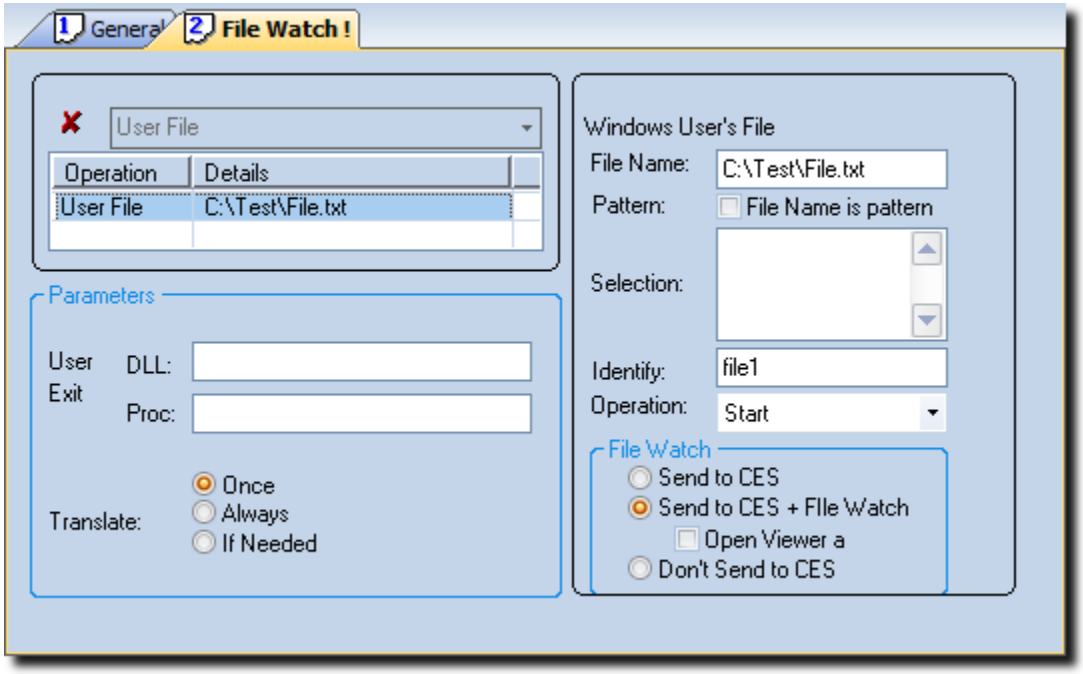
DES		Activate the selected file watch monitor at the appropriate DES Server of the monitor's session. Event24x7 activates the file watch monitors automatically when a session becomes active. When you change an file watch monitor's definition and want the changes to be effective immediately, press this button and it will send the newly defined file watch monitor to the correct DES.
New		Add a new file watch monitor. Opens the definition tabs for entering a new file watch monitor.
Delete		Delete the selected file watch monitor.
Apply		Save last changes in a file.

6.7.1 General Tab



Name	Unique identifier of the file watch monitor.
Description	User's description of the file watch monitor . Used for documentation.
Status	Enable or Disable the file watch monitor.
Created	Creation date of the file watch monitor .
Changed	Date of last change.
By	Name of the user who made the last change.

6.7.2 File Watch ! Tab

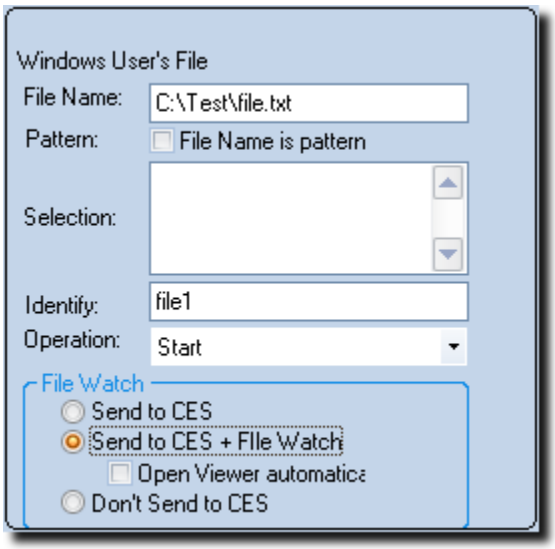


Only one field is relevant in this tab and it is the activity to perform. It is selected from a pull down menu with the following options:

User File

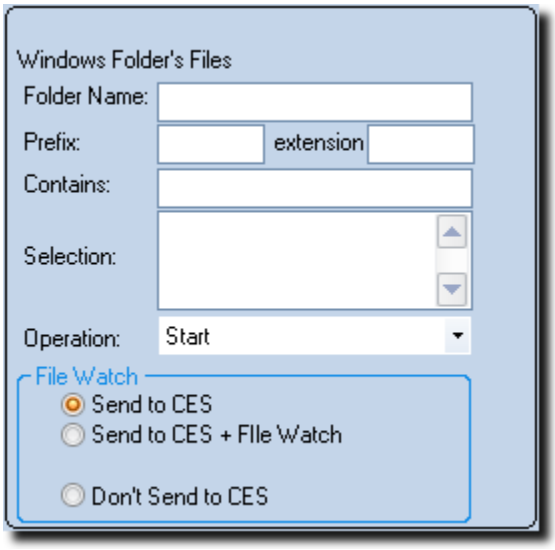
Event Log

6.7.2.1 User File



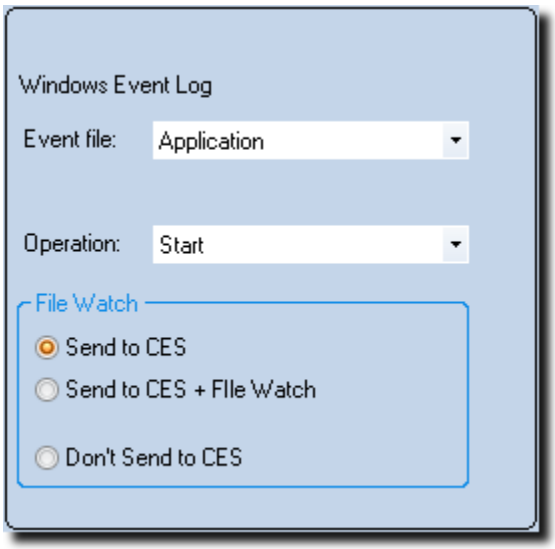
Purpose	Track file/s for any changes especially new data which is written into them	
Fields	**File Name**	Name and full path of windows file we must constantly check for any changes.
	Pattern	A checkbox indicating if the file name is stand alone or a substring of a longer file name that must also be checked. When this flag is ticked we know our checks must be added to all files which contain this file name as part of their own name.
	Selection	
	Identify	Identify string that will be sent to the Focal Point whenever a file is found.
	Operation	2 possible options: Start and Stop. The default is “Start”. If you want to stop tracking a file choose “Stop”.
	File Watch	A checkbox indicating if you can see changes in the file/s specified above reflected at run-time in the FileWatch Control screen. If ticked then yes.

6.7.2.2 Folder Files



Purpose	Locate files at the specific folder and watch for data added.	
Fields	**Folder Name**	Name of the folder.
	Prefix	Prefix of the files. Only file with the identical prefix name will be monitored.
	Extension	Extension of the files. Only file with the identical extension will be monitored
	Selection	
	Operation	2 possible options: Start and Stop. The default is “Start”. If you want to stop tracking a file choose “Stop”.
	File Watch	A checkbox indicating if you can see changes in the file/s specified above reflected at run-time in the FileWatch Control screen. If ticked then yes.
Identify	The Identify for the monitored files will be the file name itself without the extension.	

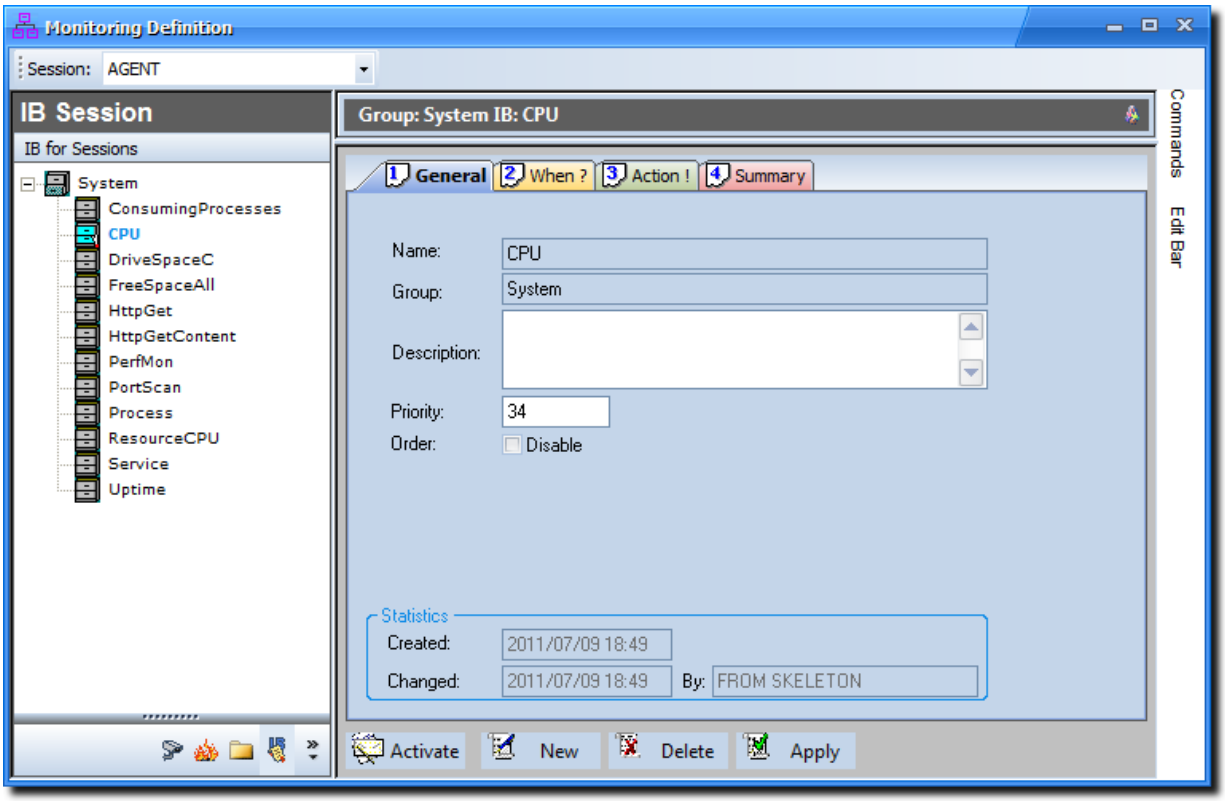
6.7.2.3 Event Log



Fields	**Event file**	Type of Event Viewer logs you want to track for any modification. Possible values are: Application, Security, Directory Service, DNS Server and File Replication Service.
	Operation	2 possible options: Start and Stop. The default is “Start”. If you want to stop tracking a file choose “Stop”.
	File Watch	A checkbox indicating if you can see changes in the file/s specified above reflected at run-time in the FileWatch Control screen. If ticked then yes.

6.8 IBs Definition

An IB object executes a single command or request at the monitored environment, using an agent that is install there. The result of the request are sent back to the DES and caught by an Interceptor.



The highlighted icon
Indicates IB Session.

IB Session Definition has two major advantages over simple IB Definition:

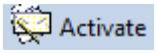
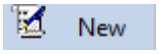
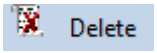
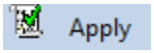
- It is ordered automatically when the Target session becomes active.
- Using Copy & Paste to copy definition to another session.

The Information Base screen has two parts:

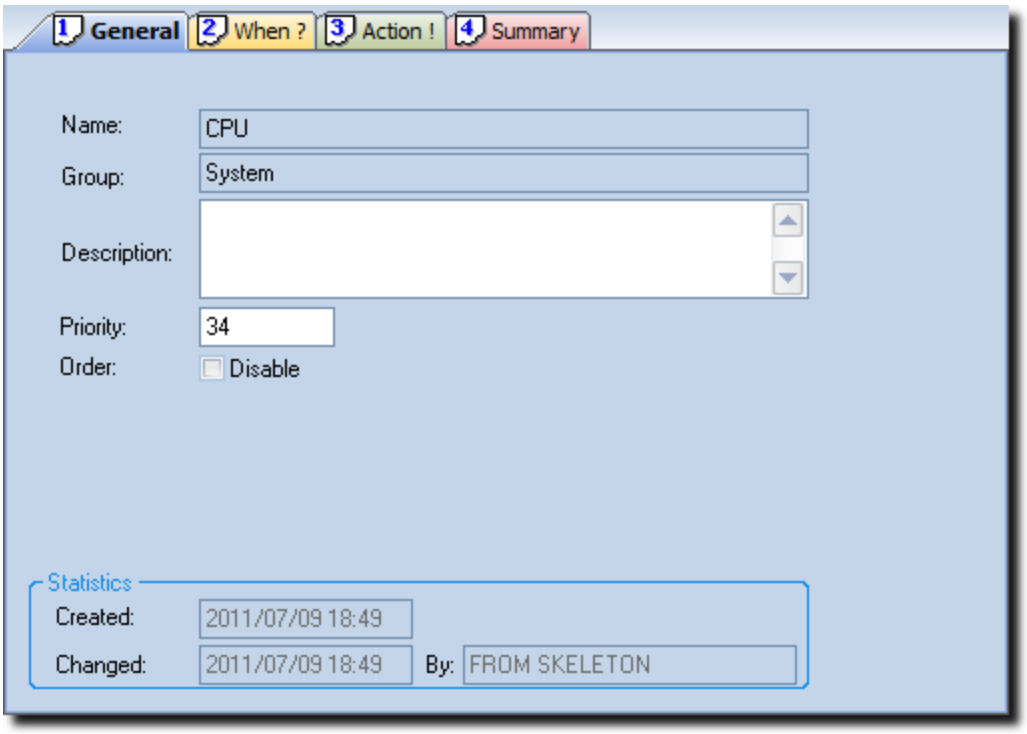
- **Information Base List**
  The IBs List located at the left pane of the screen and displayed in a tree structure.

- **Definitions tabs**
  The Information Base definition tabs at the right side of the screen.

IB screen operation buttons

Activate		Activate the selected IB. Defined IBs, are not executed until they are Activated. The activate process reads the IB from a file and sends it to the appropriate Smart Agent located at the probed machine.
New		Add a new IB. Opens the definition tabs for entering a new IB.
Delete		Delete the selected IB.
Apply		Save last changes in the file.

6.8.1 General Tab



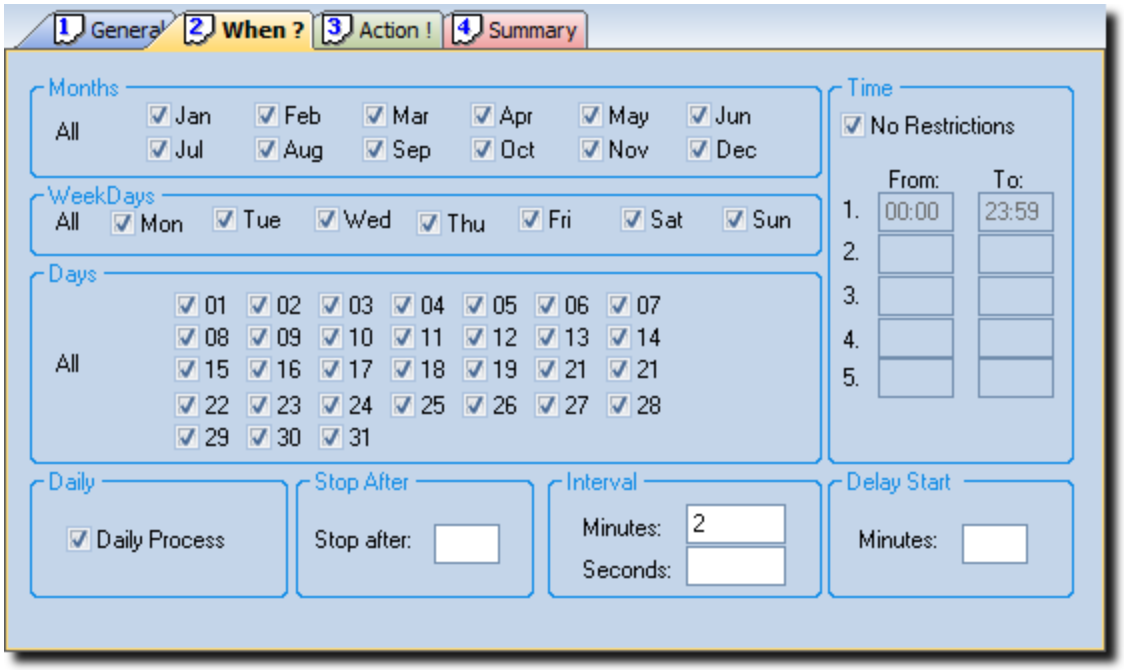
Name Unique identifier of a IB.

Description User's description of the IB.

Order Enable or Disable the IB.

Created Creation date of the collector.
Changed Date of last change.
By Name of the user who made the last change.

6.8.2 When?

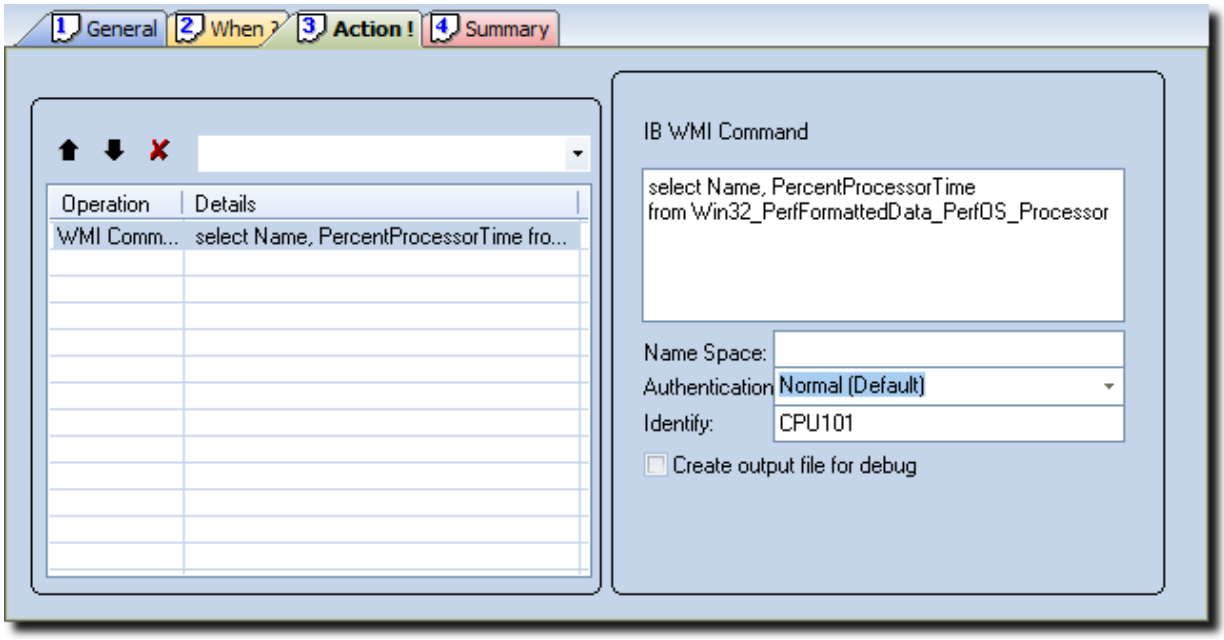


Define when to schedule the IB. Fields have the same meaning as in the When? Rules tab.

The field “Stop After” has an important role of passing parameters to the IB when the connection is established.

6.8.3 Action !

Define the single command or request that the IB executes.



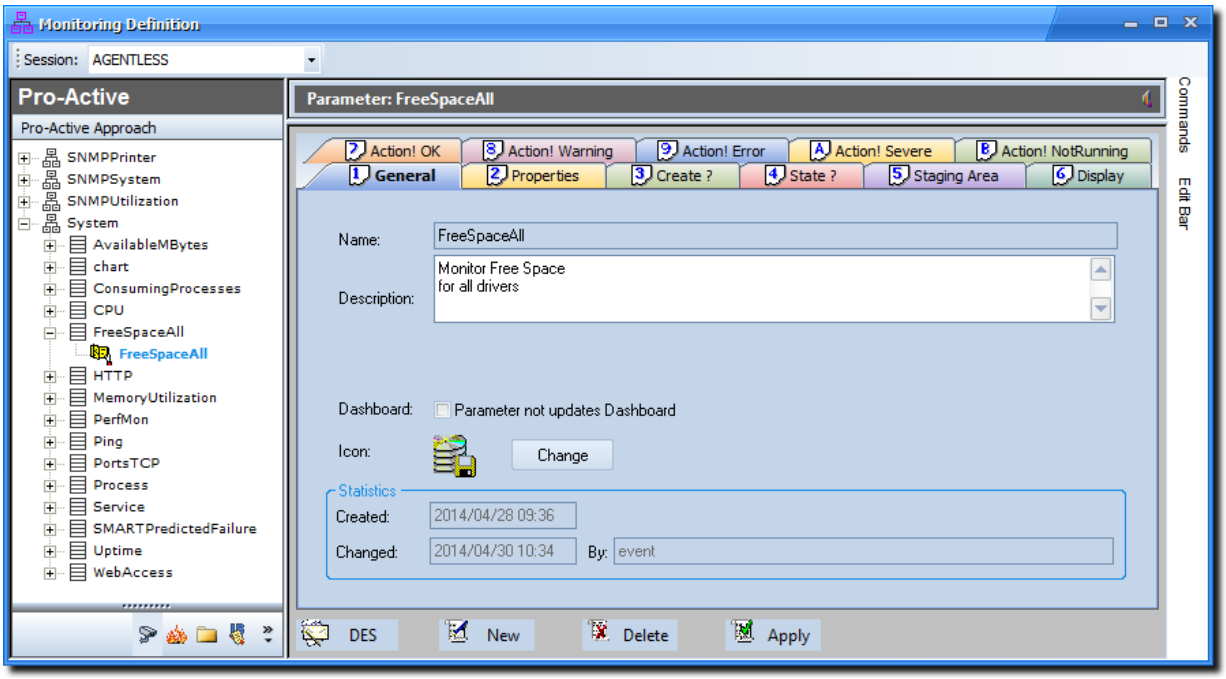
Fields	**Activity**	A pull down menu shows a list of available activities. All IB activities start with the “IB” prefix.

Available actions are explained on paragraph 4.5

6.9 Parameter Definition

The Parameter handles a single entity from the monitored platform.
The Parameter Definition screen has four groups of activities:

- Map the Collector's intermediate file to the Parameter
- Set the new state of the parameter according to the latest value.
- Set the Staging Area key (optional).
- Perform the action of the Parameter's current state.

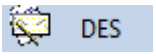
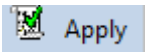


The Parameter screen has two parts:

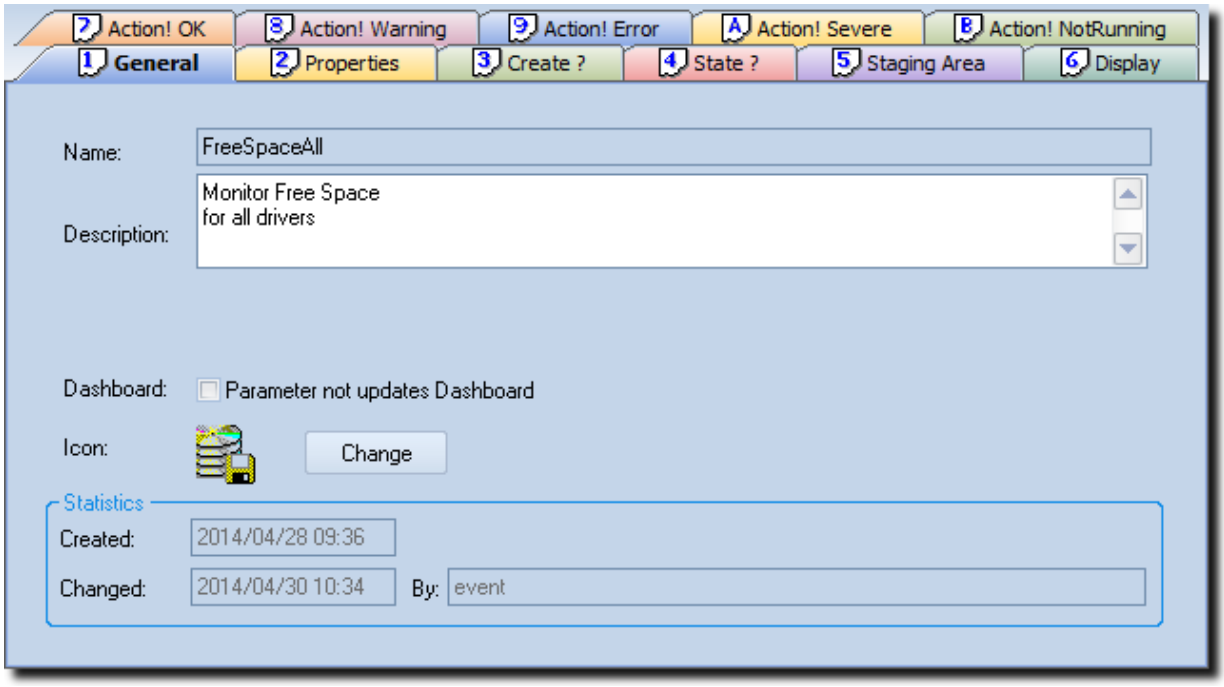
- **Parameter List**
  The parameter list is located at the left pane of the screen and is displayed in a tree structure. It contains the list of the all the defined parameters organized in groups. A group is a logical unit sharing some common content for the parameter within it.

- **Definitions tabs**
  The parameter definition tabs are at the right side of the screen.
  This section remains blank if you select a group from the parameter List, but shows detail for a parameter.

Parameter screen operation buttons

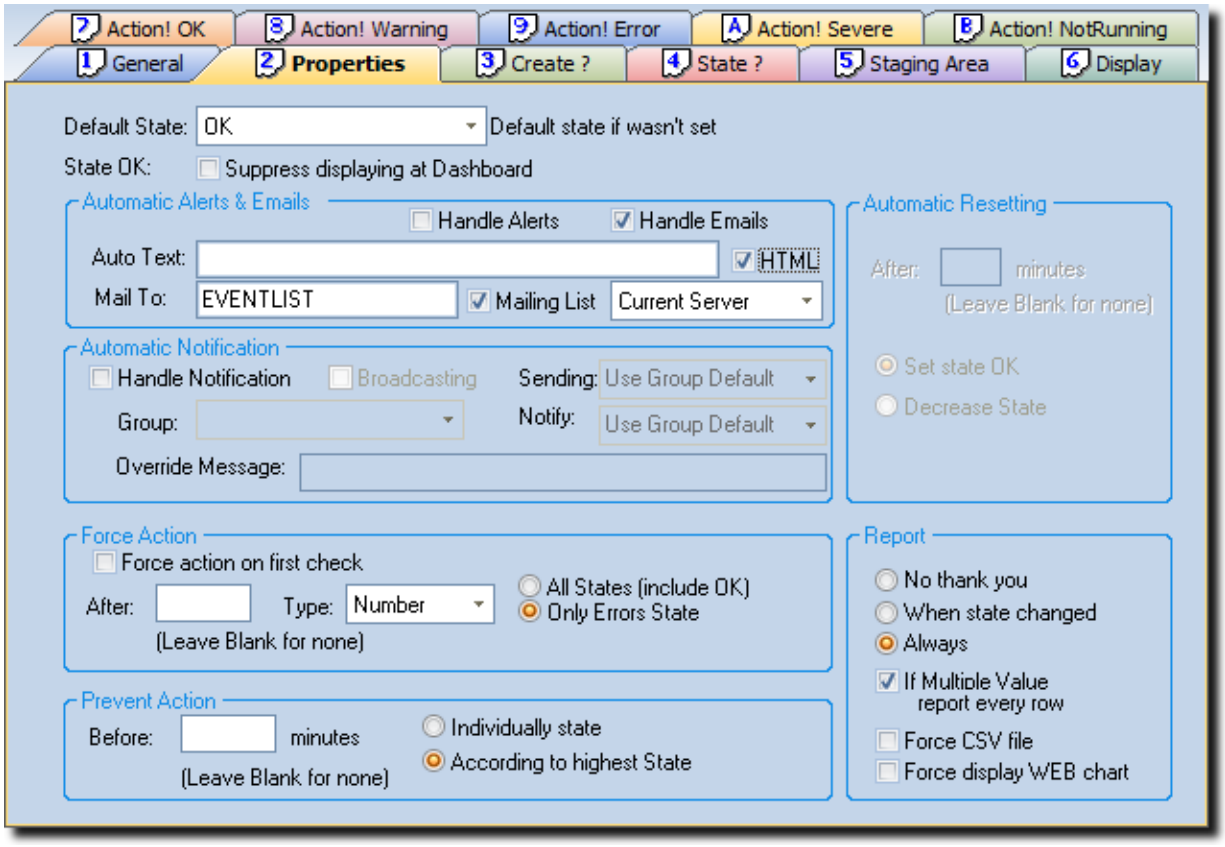
DES		Activate the selected parameter at the appropriate DES Server of the parameter's session. Event24x7 activates the parameters automatically when the session becomes active. When you change a parameter's definition and want the changes to become effective immediately, the Activate buttons sends the newly defined parameter to the correct DES.
New		Add a new Parameter. Opens the definition tabs for entering a new Parameter.
Delete		Delete the selected parameter.
Apply		Save last changes in the file.

6.9.1 General Tab



Name	Unique identifier of a parameter
Description	User's description of the parameter. This specifies the parameter target and any other information relating to the parameter. Used for documentation
Parameter not updates Dashboard	Tick this checkbox if you prefer that changes in the parameter's state will not be reflected in real time on the dashboard (i.e. the color won't change to red on the event of error). The default value is unchecked
Icon	Icon that represent the parameter in the Dashboard. The Dashboard is the screen that displays the monitors and their parameters
Created	Icon that represent the parameter in the Dashboard. The Dashboard is the screen that displays the monitors and their parameters
Changed	Creation date of the parameter
Changed By	Date of last change Name of the user who made the last change

6.9.2 Properties Tab



Default State Parameter's default state.

State OK By default every check is displayed at the dashboard. This checkbox allows suppressing the display in the OK state and showing only the error situations.

Automatic Alerts & Emails

Handle Alerts Alerts can be served as a tool to notify when a parameter's state is changed and it is not in the OK state. You can do it manually with Action! Alert or by ticking this field's checkbox to let Event24x7 know that it must alert us whenever the state is changed.

Handle Emails Like Alerts above, send an email automatically whenever the parameter's state was changed.

Auto Text For automatic alert set the alert's Message. For the Email it is the email's subject.

Mail To Mailing List	Target mail address and type.

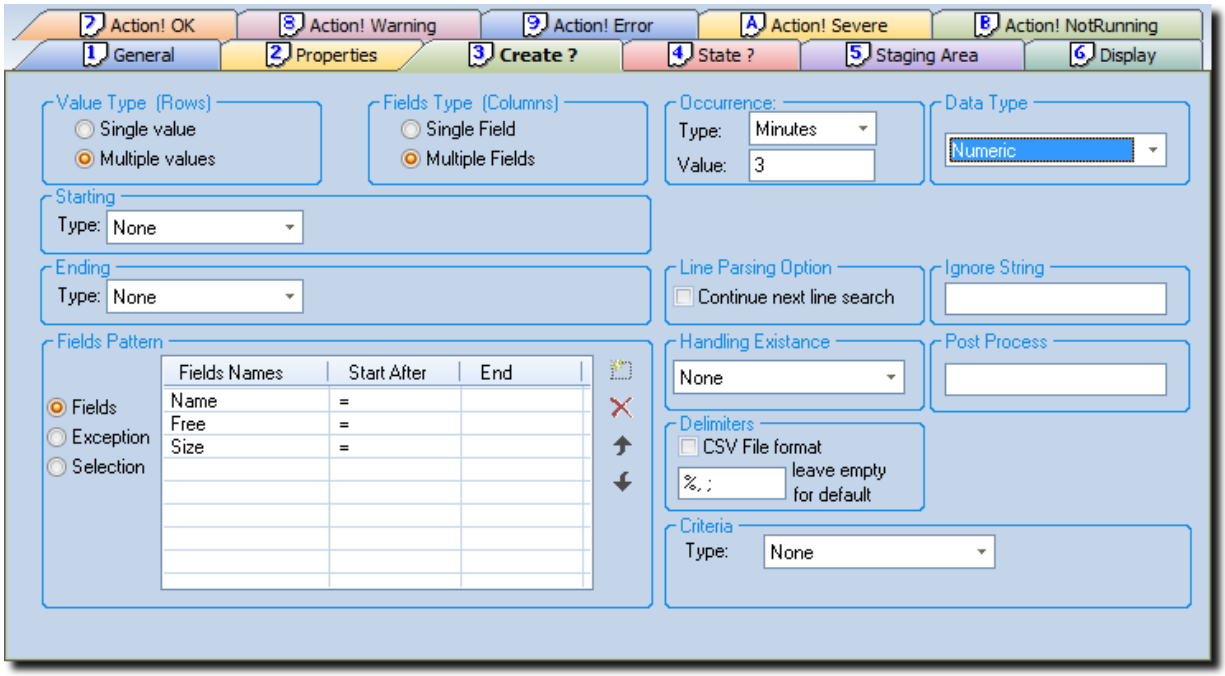
Automatic Notification

Handle Notification	Use Notification Center to send an email or SMS automatically whenever the parameter's state was changed.
Broadcasting	Send the email or SMS in broadcast mode – don't wait for acknowledgement.
Group	Select the Group of recipients to send the notifications to.
Sending	Send notifications using Group defaults or by overriding from here.
Notify	Select notification method using Group defaults or by overriding from here.
Force Action	Control the Action! part behavior. By default Action! occurs only when a state was changed. As long as the state of an object remain the same the Action! Will not be executed. You can change this locally with "PRM Force Action". This forces execution of the Action! in each cycle. Force Action manages the Action! part globally. It enables you to force performing the Action! at two points when the parameter's state wasn't changed: • At the first check cycle of the parameter. • After n checks or after a specific period of time (for example, after every hour).
Prevent Action	Control the Action! part behavior. When an object's state changes often from OK to Error and you don't want to get several emails (if mail is part of the Action! Error), you can use this option to tell Event24x7 not to perform the Action! part every time the state becomes an error. For example, not to send an email more than once in an hour.

Report	Specify if this parameter will keep the value in a report ready file.
Automatic Resetting	Reset the current state to state OK or other state which is less severe than the current one, after a specific amount of time. This is done to ensure that the parameter doesn't stay stuck in the same state for too long, especially if it's an error state which could have been caused by a bad check or unexpected result. **Important note: Only valid for Exception Monitors (not proactive).**

6.9.3 Create? Tab

This tab creates a new value for the parameter from the collector's output. Not all fields are displayed. Only the fields selected here are displayed.



In this tab we tell Event24x7 how to map the intermediate file that was created by the Collector.

Value Type The type of the parameter.

- **Single value** keeps only a single parameter value. If you know the exact line number of the value in the intermediate file, specify it in the Line# field. This value prevents the need for searching the entire intermediate file line by line.

- **Multiple values** lets you keep multiple values for a single execution. Event24x7 has specific commands to handle a list of values. For more information, please refer to the Performance variables for multiple values chapter.

Occurrence
Set the number of occurrences to keep for this parameter.
It is used by the Dashboard to display historic values of the parameter.
The value has two options:

- Count number of occurrences
- Occurrences per Minutes

Starting
Do we have a certain line to start taking the values from?
The default **NONE** is from the first line.
It can be based upon line number or String that appears in the line.

Ending
Do we have a certain line from which we stop taking the values from?
The default **NONE** is from the end of the intermediate file.
It can be based upon a line number or String that appears in a line.

Value Pattern
For Single Field only.
Define the pattern of the intermediate file for extracting the new parameter value. Possible patterns:

Fix Position	The value has a fixed position.
Prefix by string	The value is prefixed by a string. For example: Size=55
First field on line	The value is the first field in the line
Last field on line	The value is the last field in the line
True if criteria is true	Set Value=1 if criteria is met and value =0 if not. Usually it is used when the parameter is not a numeric value. For example, check if a service is running.
Result File Existence	In cases that a valid result is when the collector didn't create an intermediate file. The result is according to the Handling Existence pattern.

Fields Pattern
For Multiple Fields only.
You have to map the fields expected to be at any line.
This is a table with the field names.
Two field names have a special meaning:
Value – The value of the parameter
Name – parameter name

Exception
For Multiple Fields only.
Object you want to remove from the result. For Example, FreeSpace produces an error on some Swap drive you want to remove from the results.

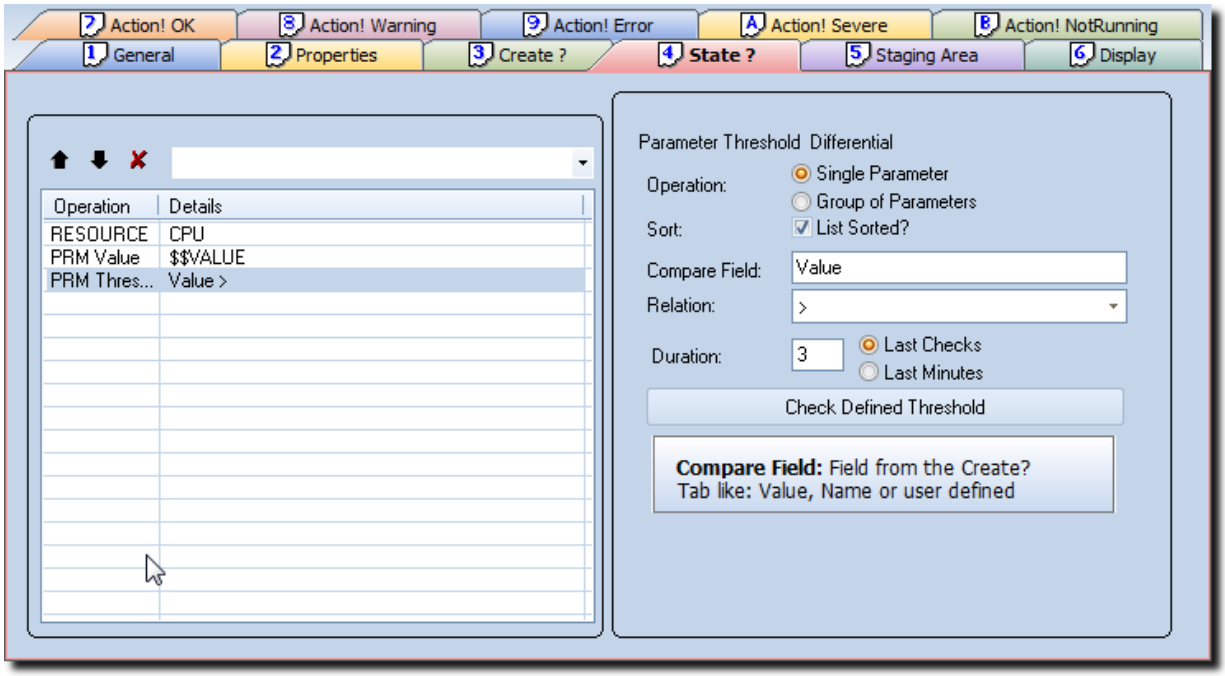
Handling Existence	Define the value that will be written into the intermediate file according to the parameter's existence.

None	Work according to a **Pattern**. If no value was gathered – no entry will be added to the parameter's value.
0-No Data 1-Data exist	If no value is gathered, it will add "no data was found" as the parameter's value.
0-No Data, Nothing if Data Exist	
Set State Default State	Force the state to be the default one.
Set State Default State + Force Action	Force state to be default + Force execution of the action that is performed when at default state.
Set State Ok, Warning, Error or Severe	Force the state to be one of them.

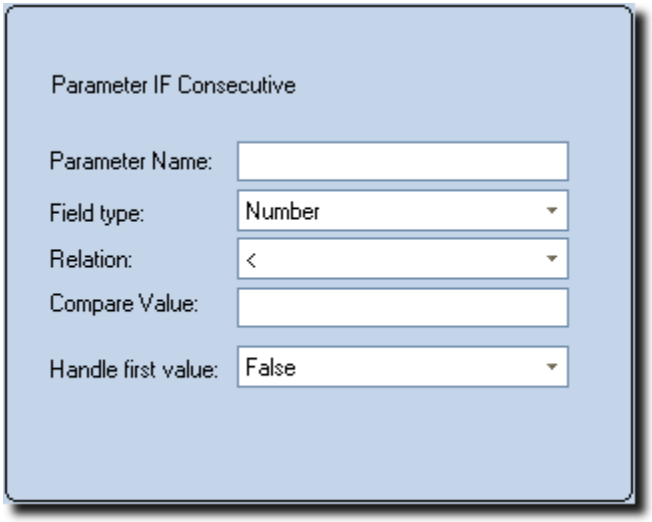
Delimiters	List of characters that are used as delimiters between the input fields.
CSV File Format	Support handling of files in this format. If we are working in PowerShell (not WMI) and we want to create a file to store the results, it must be in CSV format.
Ignore String	Search this string at each line. If exist replace it with a single blank.
Continue next line search	For multiple values. If the values are split into several lines, continue searching for the values from the next line.

6.9.4 State? Tab

The State? Tab sets the new parameter's state.
It uses the same statements as the Action! state with a special set of statements prefixed by PRM.

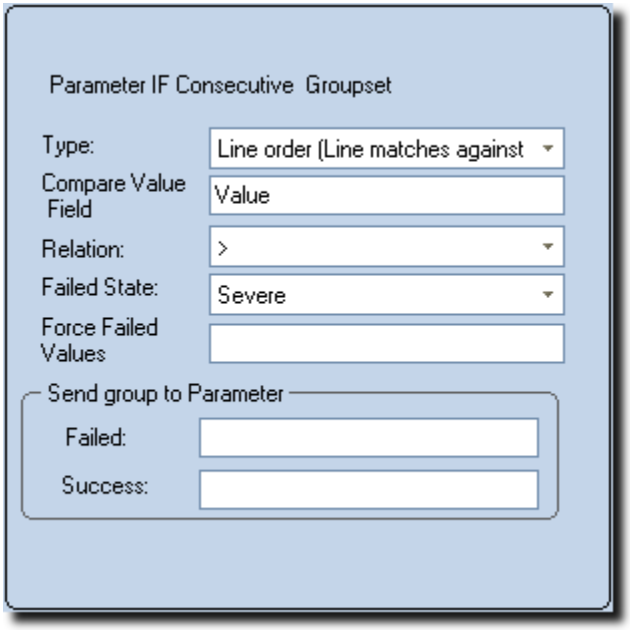


6.9.4.1 PRM Consecutive



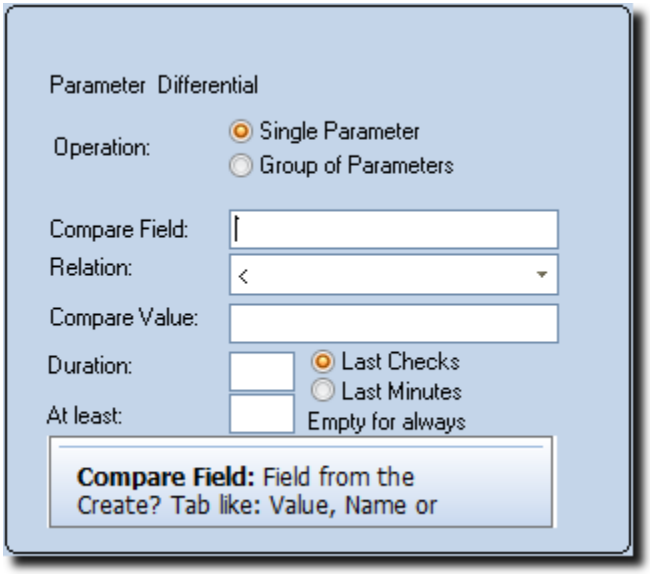
Purpose	Test current value of the parameter with its previous value	
Fields	**Parameter Name**	Name of the Parameter as defined in the Create ? tab.
	Field Type	The type of relation compared to the parameter.
	Relation	Choose one of: <, <=, >, >=, != , == Or: Increase by Value Increase by Percentage Decrease by Value Decrease by Percentage
	Compare Value	The Threshold value
	Handle first value	Control behavior of the first check when there is no previous value for comparing.
Details		

6.9.4.2 PRM Consecutive Groupset



Purpose	Test current value of a list of parameters with their previous values	
Fields	**Type**	Options: • **Count Entries** • **Line Order** • **According to Name field**
	Compare Value field	Name of the field to compare as defined in the Create ? tab.
	Relation	Choose one of: <, <=, >, >=, != , ==
	Failed State	Selected state in case of failure
	Force Failed Values	Values that will return failed state automatically
	Send Group to Parameter	Name of parameter to send the group of values to (both for Failed and Success)
Details	Compare current values of each line in the results against previous ones, and sends the relevant group of values to another parameter for further processing.	

6.9.4.3 PRM Differential



Purpose	Test parameter behavior on the dimension of time	
Fields	**Operation**	Type of Activity. Group activities check every member in the group with its value from the history results.
	Relation	Choose one of: <, <=, >, >=, != , == Or: Increase by Value Increase by Percentage Decrease by Value Decrease by Percentage
	Compare Value	The Threshold value
	Duration	Define in the dimensions of time and by which scale: Minutes or Number of previous checks.
	At least	How many times the condition should be met to consider it as enough.
Details	• Single value. Check that CPU is more than 80% during the last two minutes.	

- Group. Like in the example above, find all the processes that are consuming more than 40% over the last five minutes.

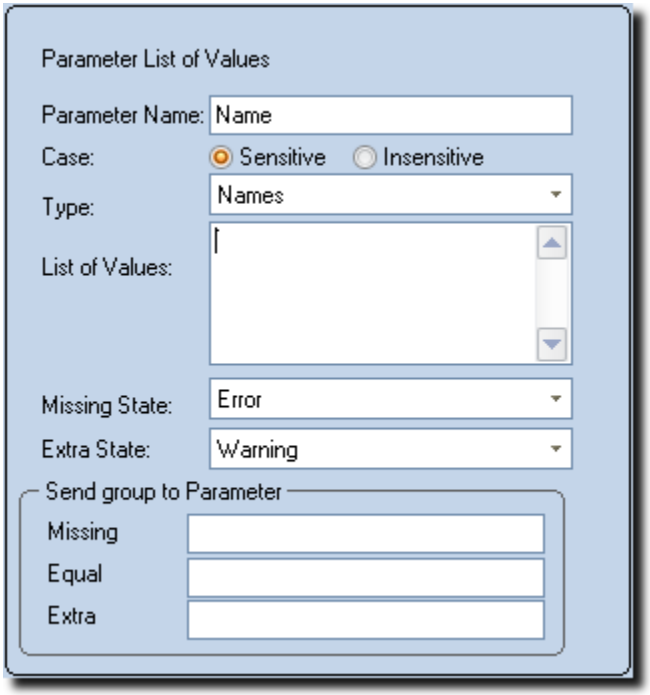
6.9.4.4 PRM Force Action

There are no parameters for this statement.

When the new Parameter's state is similar to the previous one (state was not changed as a result of the last Collector run) the Action! statements for the state will not be executed. Action! statements are executed only when the state was changed.

The PRM Force Action changes the default behavior and forces execution of the Action! statements even if the state remains the same as the previous one.

6.9.4.5 PRM List Values



Purpose

Enables automatic checking for fixed values or occurrences.
For example, verify that there are 6 java jobs.

Fields

Parameter Name — Name of the parameter's field.

Case — Tick sensitive if the value's upper case or lowercase values must also be taken into account.

Type — Three types of checks:

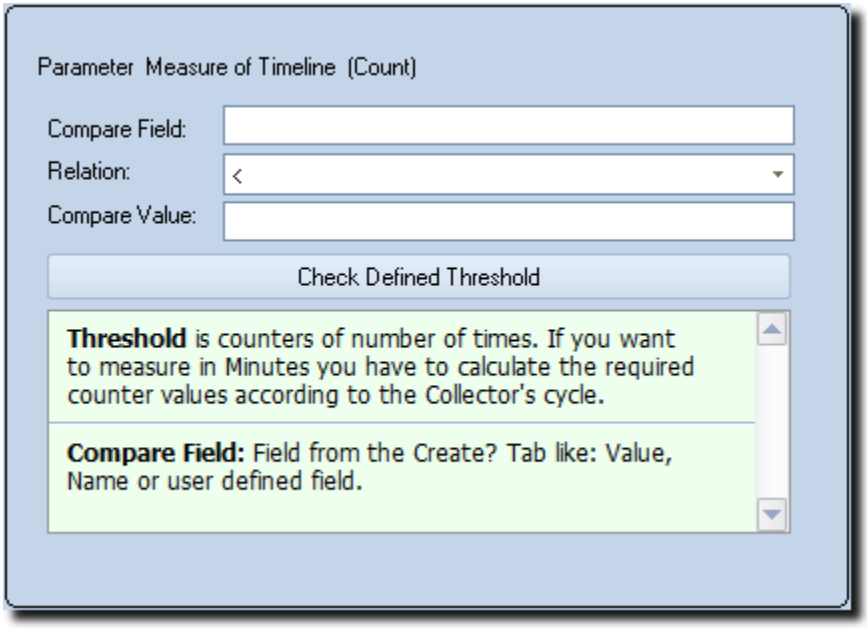
- According to a list of values
- Count of occurrences
- Other parameters

List of Values — Define the values to be checked.

Count — For checking the number of occurrences.

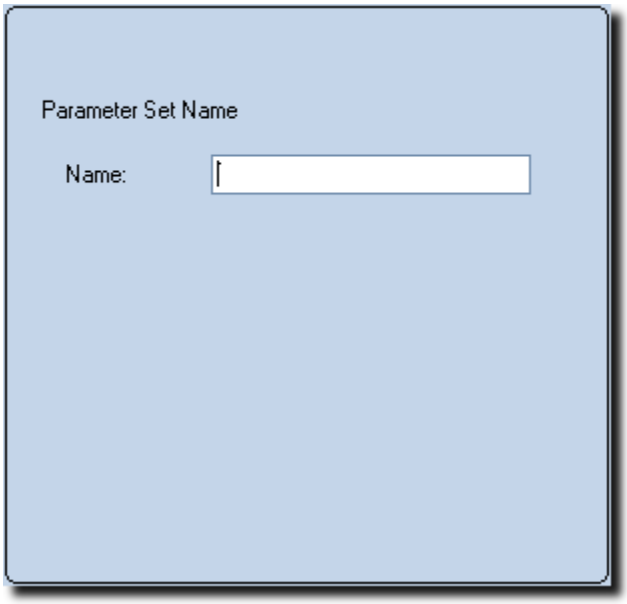
Missing State	Set the parameter's state if at least one object is missing.
Send to Parameter	
Extra State	Set the parameter's state if there are more values than what we expected.

6.9.4.6 PRM Measure of Timeline


Parameter Measure of Timeline (Count)
Compare Field:
Relation:
<
Compare Value:
Check Defined Threshold
Threshold is counters of number of times. If you want to measure in Minutes you have to calculate the required counter values according to the Collector's cycle.
Compare Field: Field from the Create? Tab like: Value, Name or user defined field.

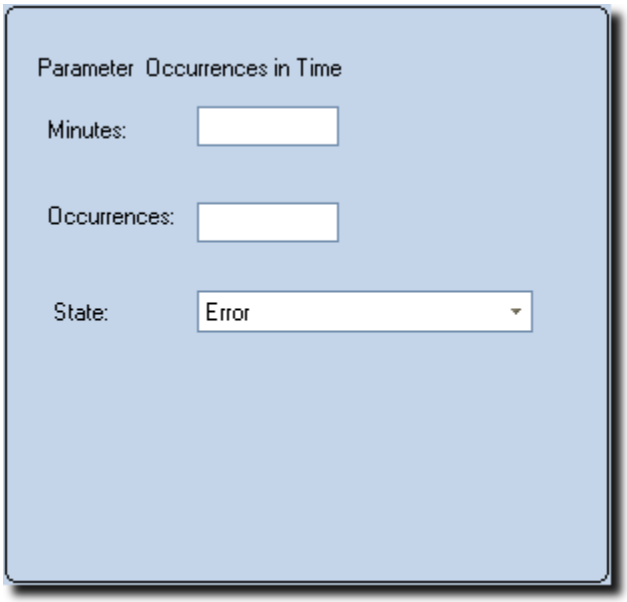
Purpose	Enables comparison of fields from the Create? Tab to a given value.	
Fields	**Compare Field**	Name of the parameter's field.
	Relation	Select relation to the given value.
	Compare Value	The value to compare the selected field to.

6.9.4.7 PRM Name



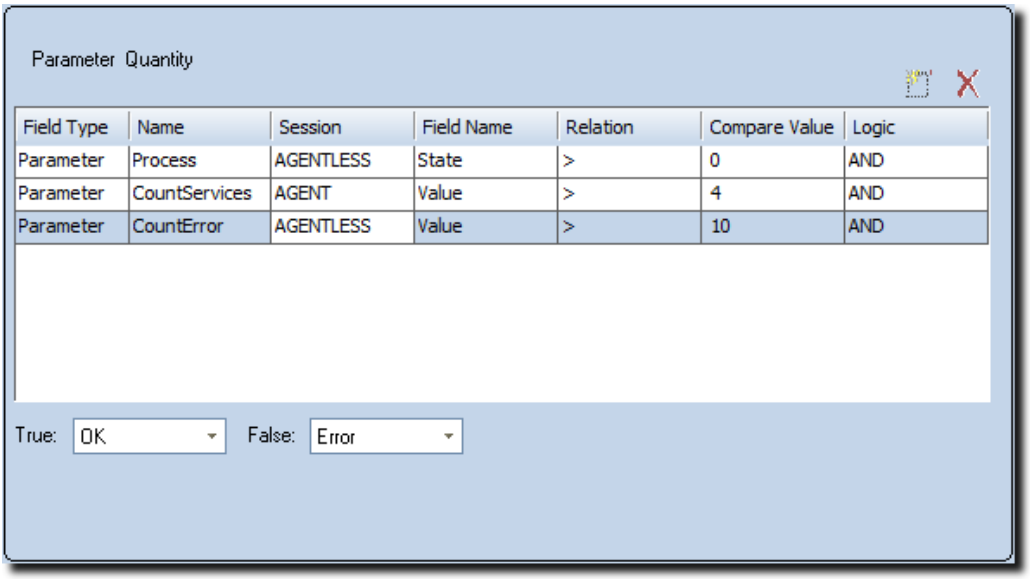
Purpose	Set the Parameter's name that will appear at the performance parameters.
Fields	**Name** Parameter Name
Details	When opening that Parameter Dashboard window to view the performance parameters, each parameter has a Name, Value and State. The Name command lets you set the parameter name.

6.9.4.8 PRM Occurrences



Purpose	Count occurrences of parameter executions.	
Fields	**Minutes**	Period of time in minutes
	Occurrences	Occurrences to count.
	State	State to set if criteria are met
Details	Uses to count how many time log record appeared during a certain period of time. For example, set the parameter to Error if there were more than four log error containing the string “Fatal” during the last Ten minutes.	

6.9.4.9 PRM Quantity



Purpose

Let you set state of current Parameter according to quantities of other Parameters or User Variables.

Fields

Field Type Parameter or Variable.

Name Name of the Parameter or User Variable.

Session Session name for Parameter

Field Name Valid for Parameter. Optional values:

- Value – Parameter latest Value
- State – Parameter State (0-Ok, 1-Warning, 2 Error, 3-Severe)
- Name from Create fields.

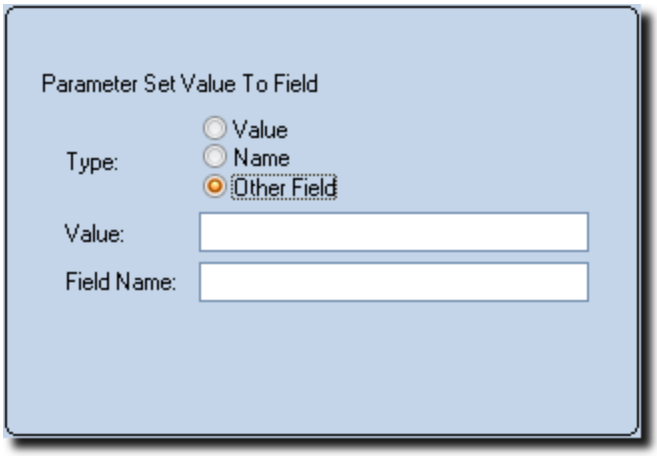
Relation

Compare Value

True
False Set the state if the quantities statements True or False.

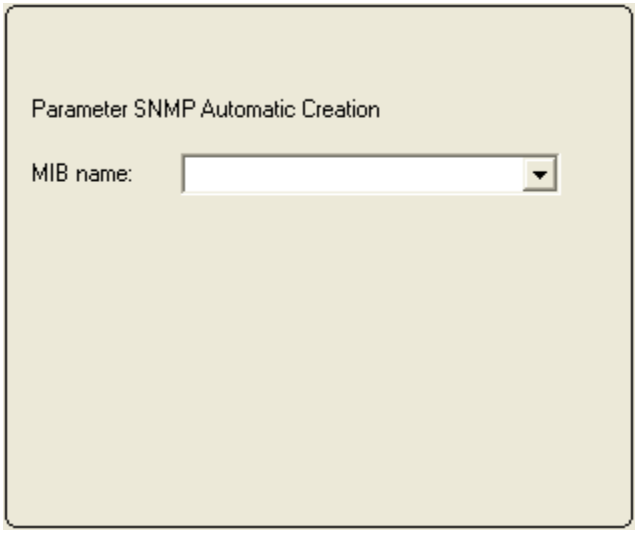
It is possible to have several PRM Quantity by setting the appropriate True/False value to “Do Not Set”.

6.9.4.10 PRM Set Value



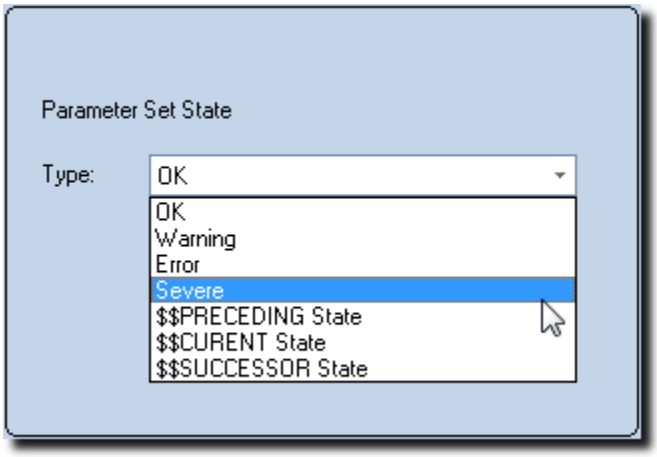
Purpose	Combine all the Set value into one single command. Allows you to set a value to any one of the parameter's fields.	
Fields	**Type**	Define the field type
	Value	Set a new value
	Field Name	If the field is not the Value or Name field, you must specify the field name as defined in the Create? Tab.
Details		

6.9.4.11 PRM SNMP Auto Creating



Purpose	Valid for Interceptor of SNMP traps. When you need to intercept all traps from a MIB usually you need to define Interceptor and Parameter for each trap. This might be consuming time effort. This command achieves the same target automatically. Every incoming trap from the specified MIB will be intercepted and sent to the Dashboard. It will appear in Dashboard as: <MIB Name>.Trap<Trap Number> The state if the trap is taken from the MIB itself from “Set State” field.
Fields	**MIB** MIB name that defined at MIB Definition.
Details	The Action! for the intercepted traps will be taken from the Action! Of the current parameter.

6.9.4.12 PRM State



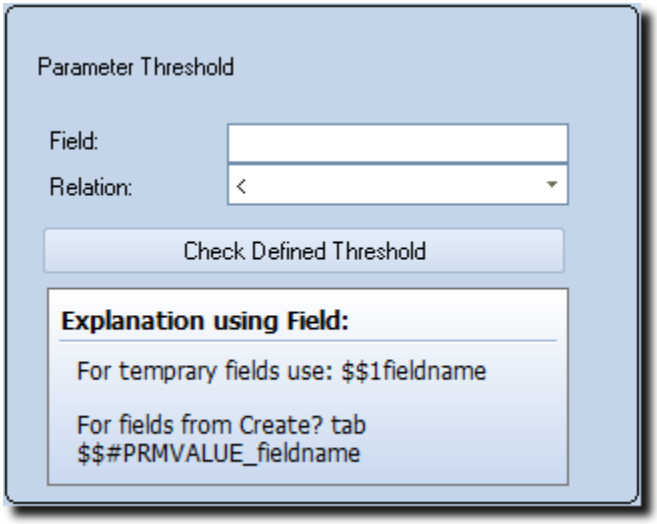
Purpose — Set the Parameter's state as a result of the latest Collector's execution.

Fields — **Type** — Select the next state. The possibilities:

OK	
Warning	
Error	
Severe	
$$PRECEDING	Set the next state at a severity of one less than the current. Example: Set next state to Error if the current state is Severe. OK state remains the same.
$$CURENT	Leave the state as it is.
$$SUCCESSOR	Set the next state at a severity of one higher than the current. Example: Set next state to Severe if the current state is Error. Severe state remains the same.

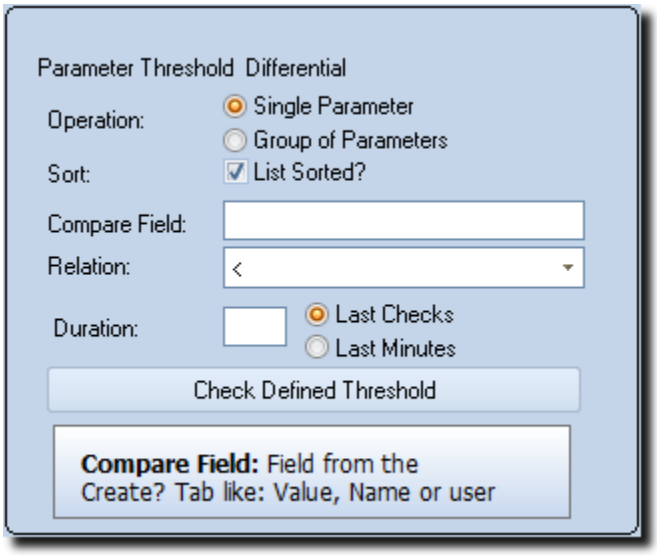
Details — Set the Parameter's state.

6.9.4.13 PRM Threshold



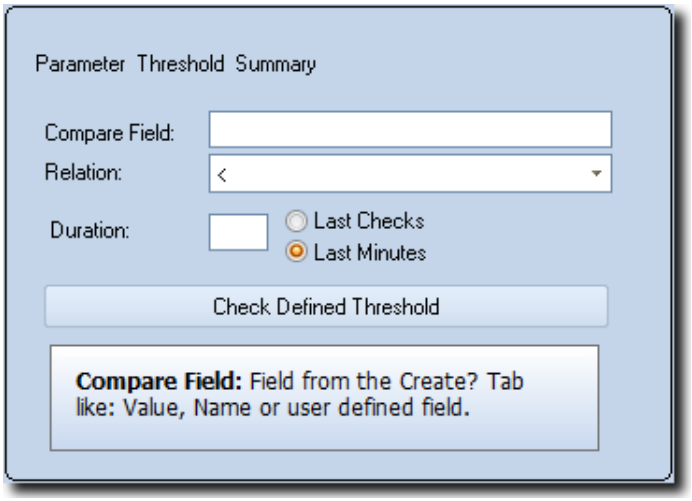
Purpose	Set the Parameter's state according to the Parameter's threshold.	
Fields	**Field**	The Parameter's field name that contain the value to be compare with the threshold. The fields are created at the Create? Tab.
	Relation	The mathematical relation
Details	This statement simplifies the use of a threshold. Every Parameter might have a threshold. In order to view or update the threshold press the "Check Defined Threshold" button. This statement first reads the parameter's threshold. 1. It takes the value of the **Field** and the value of the severe threshold. It checks the relation between those two fields with the defined **Relation.** If the condition is met it assigns the state Severe to the parameter. 2. If the first check failed, it takes the value of the **Field** and the value of the Error threshold. It checks the relation between these two fields with the defined **Relation.** If the condition is met, it assigns the ERROR state to this parameter. 3. If the first check failed again, it makes this comparison again (see section 2) but with the Warning threshold.	

6.9.4.14 PRM Threshold Differential



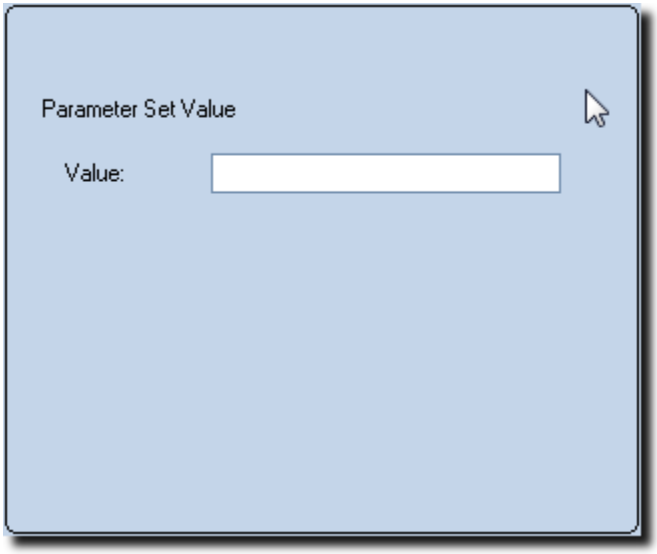
Purpose	Set the Parameter's state according to the Parameter's threshold.	
Fields	**Compare Field**	The Parameter's field name that contains the value to be compared with the threshold. The fields are created at the Create? Tab.
	Relation	The mathematical relation.
	Duration	Duration of time (can be set in number of minutes or number of checks).
Details	This statement simplifies the use of a threshold. This statement is similar to the **PRM Threshold** statement with the additional functionality of checking with the duration of time. The state is assigned only if the relation condition is met with a specific threshold value for the whole time duration.	

6.9.4.15 PRM Threshold Summary



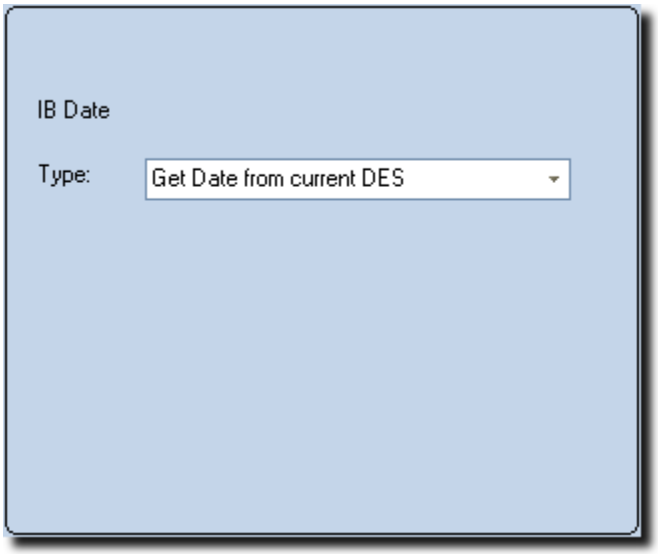
Purpose	Set the Parameter's state according to the sum of Value field and Parameter's threshold.	
Fields	**Compare Field**	The Parameter's field name that contains the value to be compared with the threshold. The fields are created at the Create? Tab.
	Relation	The mathematical relation.
	Duration	Duration of time (can be set in number of minutes or number of checks).
Details	This statement is similar to the **PRM Threshold Differential**. This statement sum the Value field in the duration of time. The state is assigned only if the relation condition is met with a specific threshold value for summarize Value.	

6.9.4.16 PRM Value



Purpose	Set the displayed Parameter value at the Dashboard.
Fields	**Value** Value to be display
Details	The parameter's display value is taken from the Collector's output. When the parameter's value is not taken from the Collector, but is calculated in the State? Tab using the IB statements, the display value remain empty. In those cases we can set the Parameter's display value. For example, getting the CPU utilization by IB RESOURCE CPU. Since the value does not come from the Collector (The Collector command is Empty), we can change the display value for the Dashboard by using PRM Value.

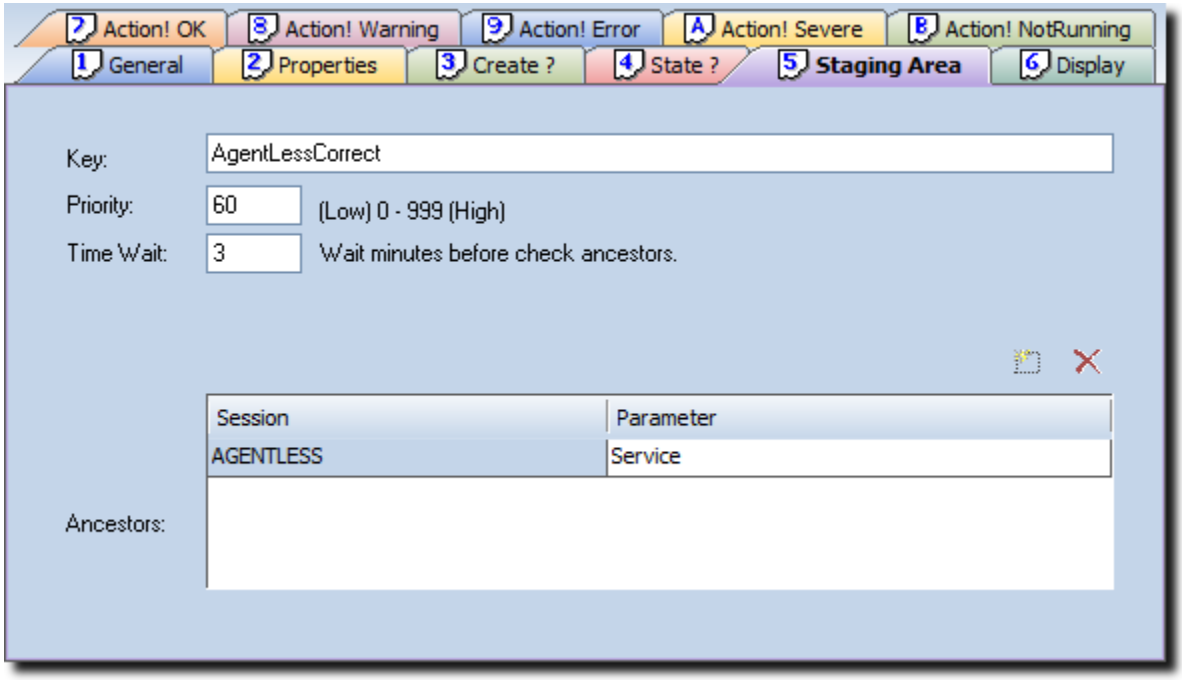
6.9.4.17 IB Date



Purpose	Get for the parameter a specific date or set a date on the target system.	
Fields	**Type**	Type of date to retrieve (either from the DES or target system) or set (only for the target system). Have the option to calculate date differences as well.
Details	This IB command can be defined only here, in the monitoring definition under the parameter's State! Tab and not in the IBs definition or Rules Definition. Therefore, this command is only supported on DES Servers.	

6.9.5 Staging Area

Delay the execution of the Action! Tab till Event24x7 verify that the ancestors of this parameter are in OK state. This is part of the root cause analysis mechanism.



Key — Staging Area Key.

Priority — When Parameter arrives to the Staging Area has priority less than currently exist one (with the same Key) it will be deleted without executing its Action! Tab.

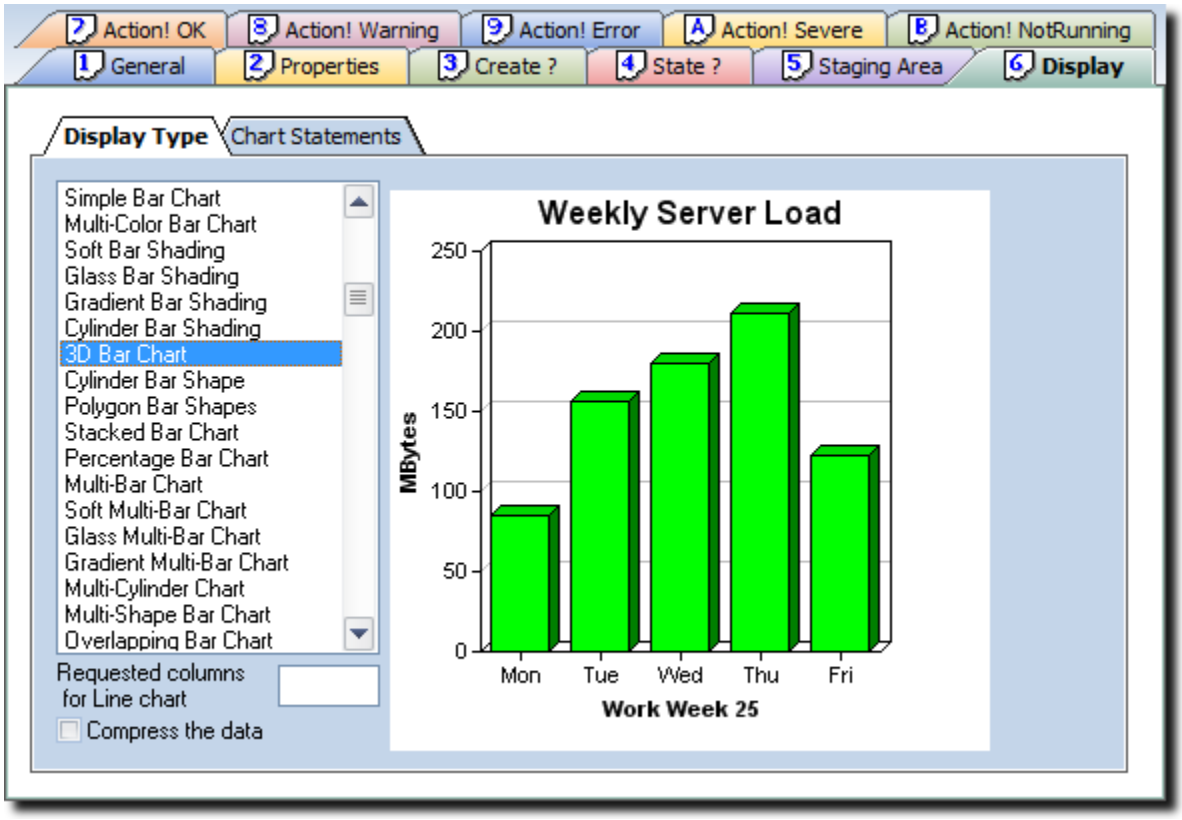
Staging Area keeps the Parameter with the highest priority at the Staging Area.

Time Wait — Time in Minutes to wait till Staging Area start to verify the ancestors state.

Ancestors — Ancestors of the current parameter.

6.9.6 Display? Tab

This tab defines the default display option of the parameter which is displayed at the Dashboard when the mouse is left button double clicked.

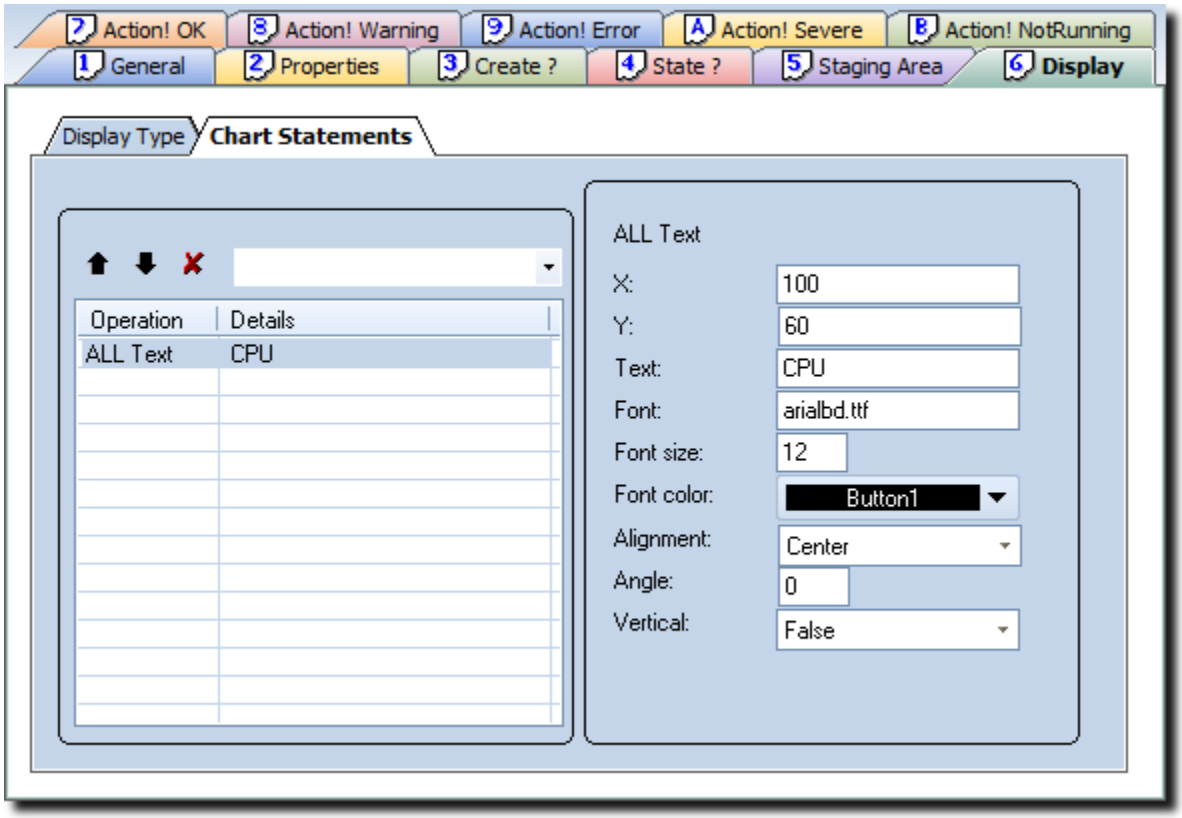


Two more fields have been added to the above screen:
Requested columns for Line chart – Maximum number of records to base the displayed chart upon only if you select a chart of this type.
Compress the data – A checkbox enabling the option to transfer the saved data from the CES folder to the EventStudio folder on compressed files (If ticked – then compress). This enables us to transfer more data when necessary.

6.9.6.1 Display Type

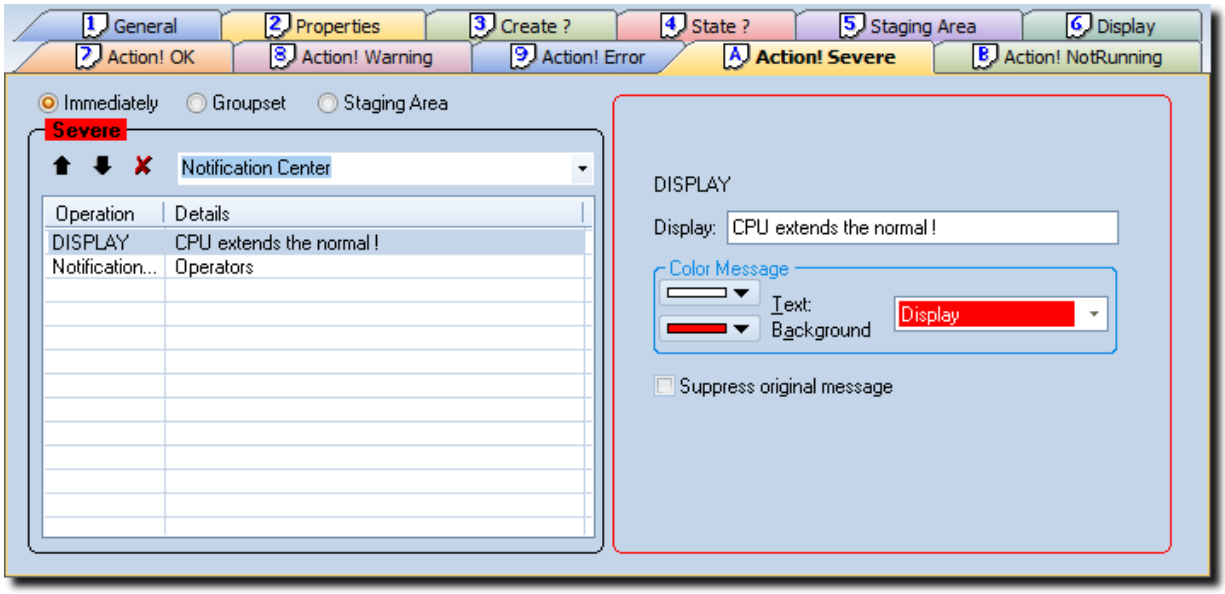
Provide a list of available charts. Select the chart you want to display the parameter on. Event24x7 will convert the Parameter's value into a chart.

6.9.6.2 Chart Statements



Gives you the ability to add specific labels and formatting options to the chart.

6.9.7 Action! Tabs



There is an Action! tab for each state.

The Action! tab behaves the same as the Action! Rule tab.

Only a single Action! tab is executed at any cycle, according to the Parameter's state. If the Parameter's state was not changed, the related Action! will not be executed unless the PRM Force Action statement appeared in the State? tab.

Event24x7 let you control when the Action! Commands executed:
Immediately - As soon as the state changed or by passing Force Action command.
Groupset – Actions in the Groupset will be executed immediately and will affect all of the parameter's results that have the highest severity state. For example: if we are checking the Free Space of all the drives on a computer and 2 of the drives got Error state, then any action written in the Groupset actions in the Action! Error tab will be applied to both drives (for instance: 2 emails will be sent - One for each drive).
Staging Area - Deferred. The Action sent to Staging Area to verify the state this parameter's ancestors. This will prevent "White Noises" meaning sending wrong action commands.
It is possible to combine the two methods and use both of them simultaneously.

A Pull down menu shows a list of activities that can be executed under each of the Action! Tabs. Many of these activities are identical to the Rule's Definition activities.

Activate IB	Activate Information Base at a remote session.
Activate Rule	Activate a rule or group at Event24x7's server.

Activate Workflow	Activate a Workflow.
Alert	Open a new Alert at the alert windows.
Backup	Automatic backup of the User configuration files
Beep	Generate a “Beep” sound.
Case	Add a **CASE** line to the **SELECT** statement.
Change Collector Interval	Change the Time and Interval parameters of a Collector dynamically.
Charts	Create a chart for a Parameter.
Check Thresholds	Check values against thresholds.
Clear Text	Clears the text in current line.
Command	Issue a command to the session.
Command DOS	Issue a DOS command.
Command PsExec	Issue a PsExec command on remote computer.
Command Special	Send special character keys to a session: Enter Tab, Reset, home, New-line.
CTM Condition	Handle CONTROL-M conditions.
CTM Jobs	Orders or forces jobs from a Scheduling table.
CTM Load set	load-balancing algorithm for CONTROL-M
CTM Resource	Performs operations on the Quantitative Resources table.
CTM Shout	Sends a message to the specified user or destination.
Database Command	Command to perform on the database.
Database Command Free	Command to perform on any selected database.
Database Insert Event 24x7	Event24x7 parameter’s value to insert in the database.
Database Reset	Reset the database server.
Display	Display a message to the focal point
Else	Add an **ELSE** line to the **IF-THEN** statement.
Else Object	Add an **ELSE-Object** line to the **IF-Object** statement.
Else Parser	Part of the **If Parser** command – the statements following the Else parser are performed when the IF parser conditions are not met.
Exchange Move	Either Move or Copy messages from one mailbox account to another or Delete specified messages.
Exit Rule	Stop the execution of the current rule.
File Copy to Server	Send file to EventStudio
File Handle	Copy one file to another or delete it.
HTTP	Check availability of URL.
IB Application Pool	Handle IIS application pool.
IB Boot	Restart options for the specified session – either ShutDown, Restart and Win32Shutdown options.
IB Command	Specific command to run on the Information Base.
IB Disk Space	Retrieve disk space on drive of running server.
IB Memory	Retrieve memory (physical or virtual) available on running server or session.

IB Performance	Refers to the Performance monitor – gives you the option to monitor specific objects that exist inside the perfMon on the related RES server.
IB Performance VB Script	Like the previous command refers to performance monitor objects but in this case with the use of a VB script.
IB Process	Check all the existing processes running on a server. Have the option to start or stop a specific process.
IB Resources	Check internal resources of an existing server: Either CPU, Memory, Handles or Thread Count.
IB Service	Check server's existing services. Have the option to start, stop, restart or just check the status of a specific service.
IF	Open **IF-THEN** statement**.**
IF Object	Open **IF-Object** statement.
IF Parser	Open **IF-THEN** compiled statement – like IF but for multiple conditions.
Log Event24x7	Write a text message to CES or DES Even24x7 log file.
Log User	Write a text message into any user file.
Mail	Send an email notification.
Mail Status Run	Send Parameters status via mail.
Notification Acknowledgement	Acknowledgement for mail.
Notification Center	Activate the Notification Center for the current Parameter.
Notification SMS Immediate	Send an immediate SMS notification.
Parse File and Set	Convert a file to Event24x7 variables.
Parse Input and Set	Convert a single message to Event24x7 variables. Optionally you can send them to Parameters.
Ping	Check address for connection.
Play File	Play file to get the operator's attention.
Popup	Display a variety of notification popup windows.
Program	Execute any external program at the Server machine.
Program As User	Execute any external program under User credential
Remove Rule	Remove a rule or group from memory.
Report	Save a report for Open Problems on Event24x7.
Restart Server	Restart current Event24x7 server.
Select	Open **Select** statement.
Send Server	Send User Variable from CES to DES
Send Value	Send User Variable from CES or DES to IB (Agent of RES).
Server Command	Simulate receiving command on the Focal Point.
Server Parameter	Send Parameter to DES.

Session	Stop/Start session.
Set	Create and assign values to a User Edit variable.
Set Parameter	Set a value to a Parameter bypassing a Collector.
Set String	String manipulation.
Sleep	Sleep for a specified amount of seconds
SMS	Send SMS message via internet.
SMS Wireless	Send SMS message via cellular modem
SNMP Mib Interactive	Send or Get or Set SNMP requests for SNMP objects.
SNMP Mib Trap	Send a SNMP Mib Trap.
SNMP Send Trap	Send a simple SNMP Trap.
Table Talk	Ability to manage dynamic arrays in memory on the fly
Tcpip	Send a TCP/IP packet to host.
Terms	Add or delete a term
Text in Screen	Find a specific text on the console screen.
User Exit	Execute a user defined DLL or DLL process.
Voice	Start Event24x7 IVR request.
While	Open **DO-WHILE** statement.

The Action! Tab may contain any number of action commands. Execution of the commands is done sequentially from the first to the last.

Using Event24x7 Variable in Action!

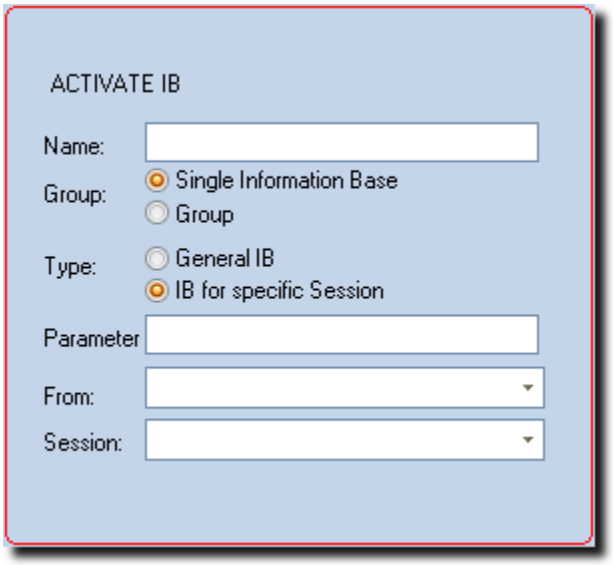
When adding actions in Action! You can use Event24x7 System variables (prefix of $$#) and global User variables (prefix $$) in the parameters. See Special Variables section for more details.
When the parameter executes the Action**! Tab Statements, it first checks whether the statement contains Event24x7 variables. If it does, it first changes each variable to the correct value and only then executes the action.**

6.9.7.1 Action! NotRunning

Action! NotRunning tab will be executed if the collector didn't finish its execution properly. There cases where the collector is not configured properly and could not finish correctly. In these cases, the parameter will get a NotRunning state and Action! NotRunning tab will be executed.
Once the collector will run again and get a normal result – the parameter state will be change accordingly.

6.10 Action! Parameters for Monitors

6.10.1 Activate IB

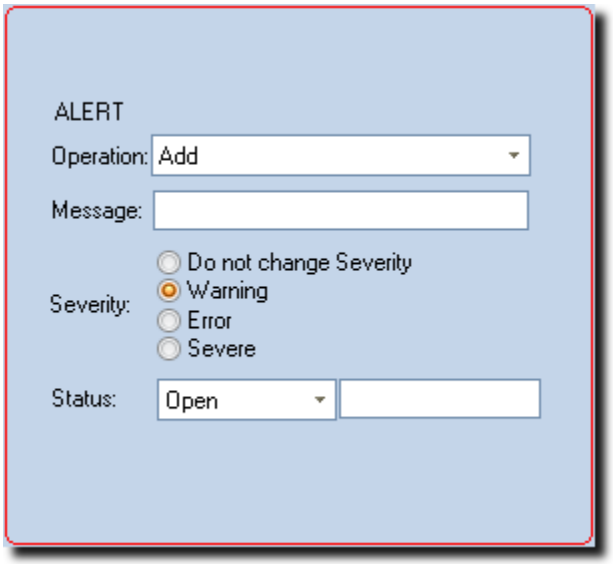


Purpose	Activate Information Base at a specific Event24x7 RES (smart agent).	
Fields	**Name**	Name of a single IB or Group of IBs to activate.
	Group	Choose IB or group of IBs
	Type	Choose target: single IB or entire Group of IBs.
	Parameter	Name of parameter to execute.
	From	Determine from which server to take the IB to send: **Current Server**, **ask CES to send** or **if current failed send to CES**.
	Session	Session to receive the Information Base. Choose a session from the list of defined sessions of Event24x7.
Details	Activate Information Base on a specific session. Has the same result as Activate IB from the IB definition.	

6.10.2 Activate Rule

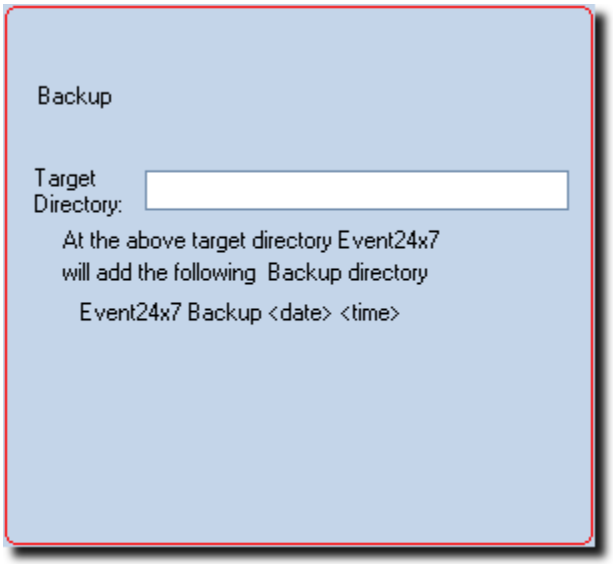
Purpose	Activate a Rule.	
Fields	**Name**	Name of a single Rule or a Group of Rules to activate.
	Type	Choose as a target either a single rule or an entire group of rules.
	From	Determine from which server to take the Rule: **Current Server**, ask **CES** to send or **If Current Failed Send to CES**.
	Server	Server to activate the rule
Details	Activate Rule. This has the same result as Activate Rule from the IB definition screen.	

6.10.3 Alert



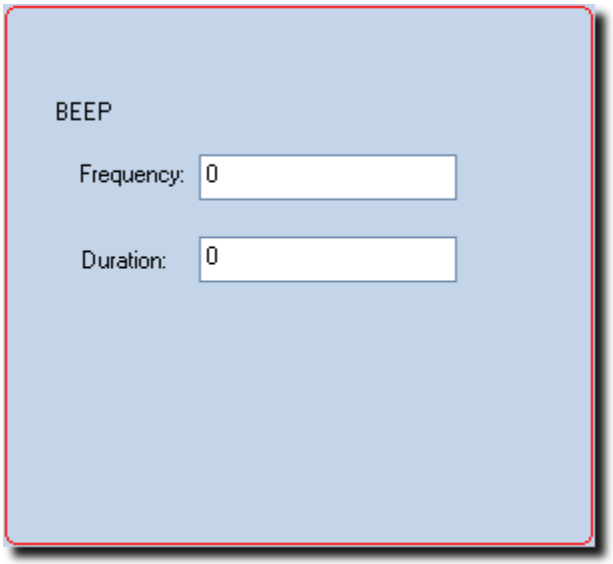
Purpose	Create a new Alert in the Event24x7 alert system.	
Fields	**Operation**	Choose the operation Add, Update(two modes or options: **Changed only** or **Changed if Exist, Add if not**) or Delete.
	Message	Alert message
	Severity	Choose severity type. The Alert background is displayed with the color according to the severity. Warning – Yellow Error – Orange Severe - Red
	Status	Set the alert new status. If the operation is Assigned, then specify also the user name at the right field.
Details	Alert is Event24x7's component which signals to the operator that a problem exists. The Alert remains active until the problem has been resolved. The Alert is handled from the Alert Screen.	

6.10.4 Backup


Backup
Target Directory:
At the above target directory Event24x7 will add the following Backup directory
Event24x7 Backup <date> <time>

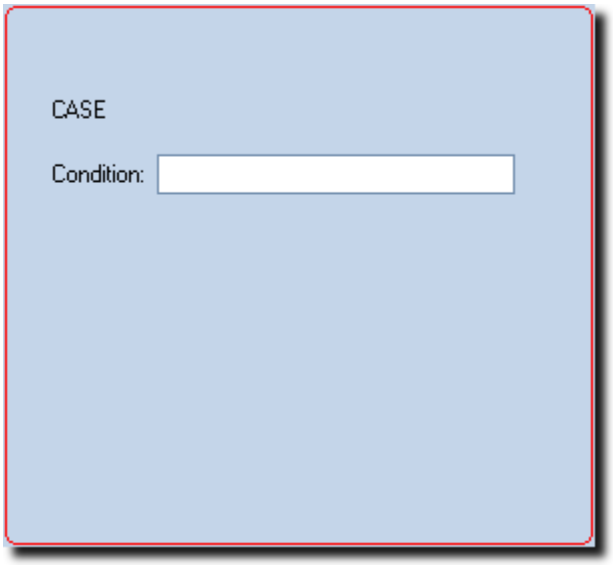
Purpose	Backup the user's configuration files.	
Fields	**Target Directory**	Place to write the backup files.
Details	It is important to take a backup occasionally of the user's configuration files.	

6.10.5 Beep



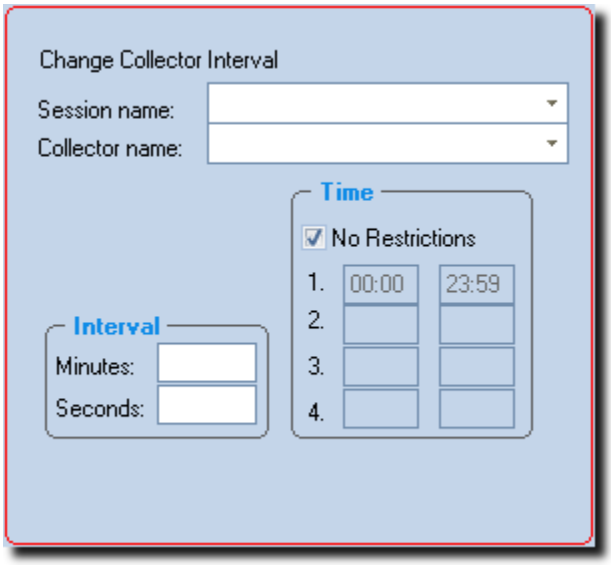
Purpose	Play a beep on the PC internal speaker.	
Fields	**Frequency**	Frequency, in hertz, of the sound. This parameter must be in the range of 37 through 32,767 (0x25 through 0x7FFF).
	Duration	Duration, in milliseconds, of the sound.
Details	The **Beep** function generates simple tones on the speaker.	

6.10.6 CASE



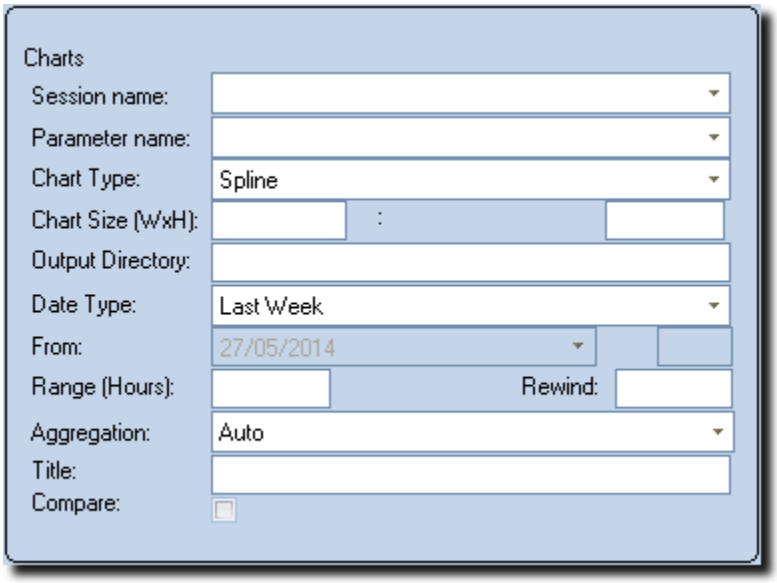
Purpose	Add CASE clause to the **SELECT** clause.
Fields	expression.
Details	Two lines are added to the actions command: **CASE** expression **CASE-END** You can add action statements between the above lines, and these statements will execute only if the CASE in the first expression is valid.

6.10.7 Change Collector Interval



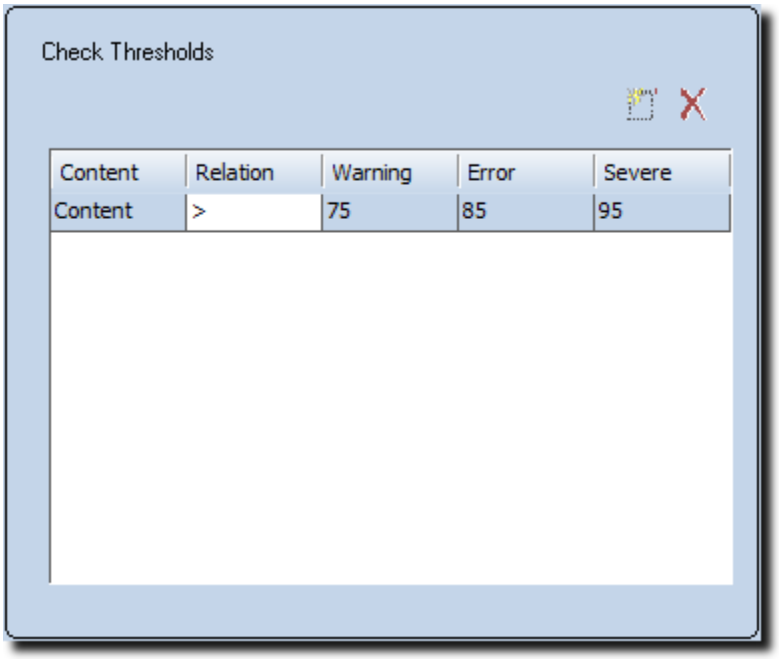
Purpose	Change the Time and Interval parameters of a Collector dynamically. This is done only in the **Monitoring Definition** And has no relation whatsoever to the Rule Definition.	
Fields	**Session Name**	Session name of the collector
	Collector Name	Collector name.
	Time & Interval	Similar Time and Interval fields as the Collector When? Tab
Details	If for example, a cyclic test is performed every half an hour, when the state becomes Severe, the parameter starts correction activities. It is sometimes vital to monitor the cure activities closely. This command lets you change the next cycles. Reduce the cycle interval until the state returns to OK. Then increase it back to every half an hour.	

6.10.8 CHARTS



Purpose	Create a chart for a Parameter.	
Fields	**Session name**	Session name of the parameter.
	Parameter name	Parameter name.
	Chart Type	Chart type (Line, Pie, Bar…).
	Chart Size (WxH)	Chart size (Width, Height).
	Output Directory	Output directory for the chart file.
	From	Starting date and time.
	Range (Hours)	The number of hours from the first sample tills the last.
	Rewind	the number of days to rewind for the comparison entry
	Aggregation	Aggregation mode (Auto, Hour, Day, Week, Month).
	Title	Chart's title
Details	The **Charts** function creates a chart for a selected parameter.	

6.10.9 Check Thresholds



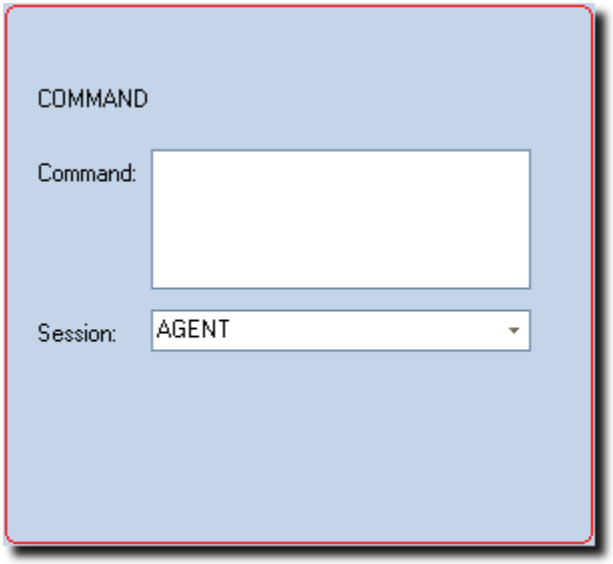
Purpose	Change the state dynamically.		
Fields	**Content**	Field name from the Create Tab.	
	Relation	Relation to compare	
	Duration	Duration, in milliseconds, of the sound.	
Details	Take the value of Content field and compare it to the specified threshold. Set the Parameter state according to the Relation and the thresholds.		

6.10.10 Clear Text

The command has no dialog.

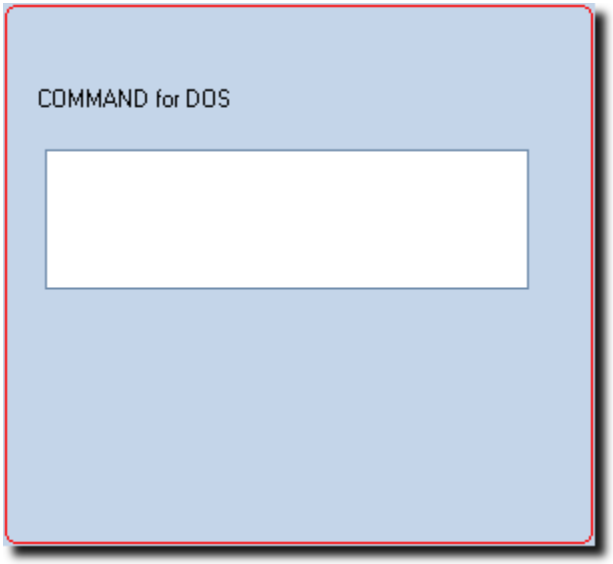
Purpose	Clear the context of the session's console
Fields	None
Details	Event24x7 Script handles automatic login script and sends wireless SMS. Both scripts may use the Action! Text on the Screen to search for specific text in the session's console. It is sometimes required to clear the console in order to delete existing lines from previous requests. This is relevant only in Linux and Unix sessions when attempting automatic login.

6.10.11 Command



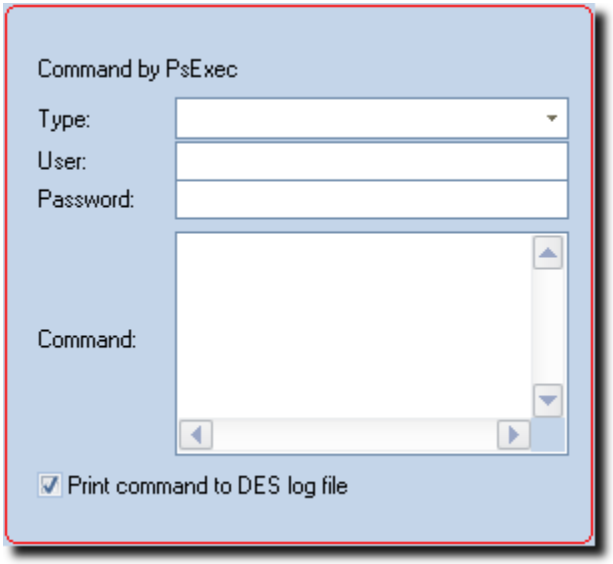
Purpose	Send a command to a monitored session.	
Fields	**Command**	The command to send.
	Session	The session to send the command to. Choose a session from the session list. The first entry on the session list is "Current Session". It sends the command to the same session that is the source of the event triggering this monitor.
Details	Send command to the target session.	

6.10.12 Command DOS



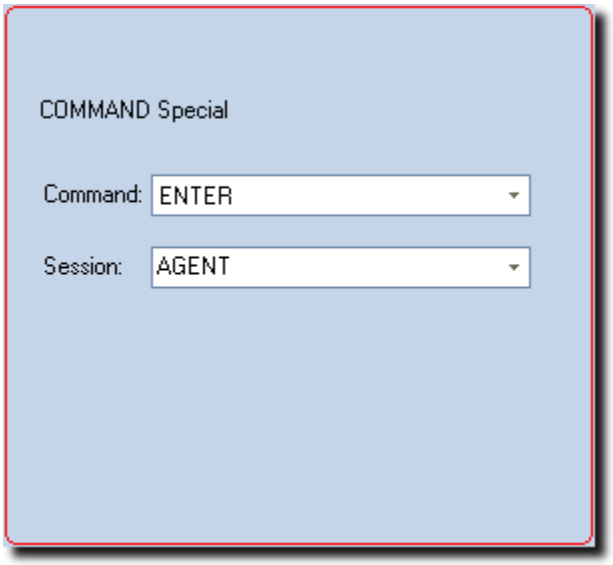
Purpose	Issue a DOS command on the monitored session.	
Fields	**Command for DOS**	The command to send.
Details	Issue a DOS command on the target session.	

6.10.13 Command PsExec



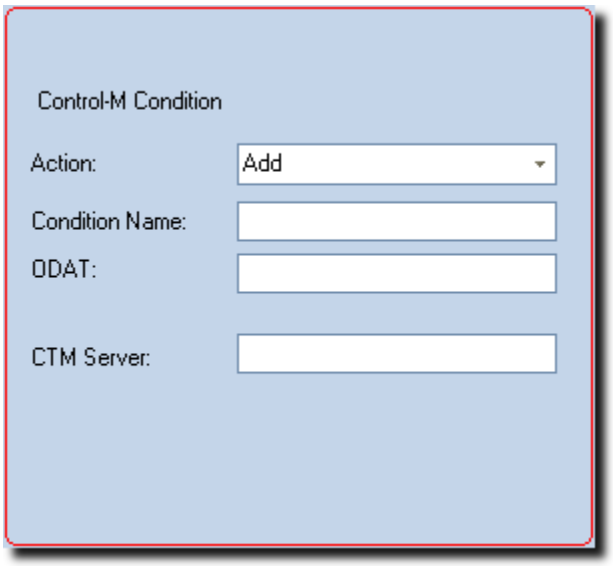
Purpose	Send a PsExec command to a monitored session.	
Fields	**Type**	Internal or External utility.
	User	User name to be used for the command.
	Password	Password to be used for the command.
	Command	The command to send.
Details	Send PsExec command to the target session.	

6.10.14 Command Special



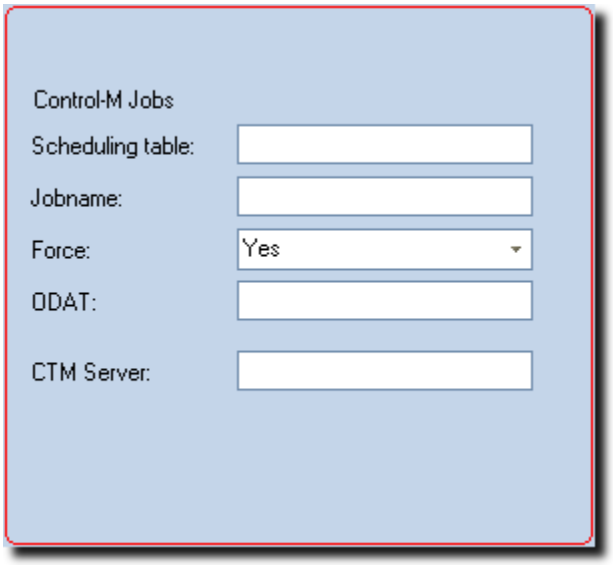
Purpose	Send a special command to a monitored session.	
Fields	**Command**	Choose a command to send from these available options: **ENTER**, **TAB**, **RESET**, **HOME**, **NEWLINE, Blank, BREAK, EOF** and a set of **Control-Key** commands**.**
	Session	The session to which the command is sent to. Choose a session from the session list.
Details	The special command can't be sent by the ACTION! COMMAND.	

6.10.15 CTM Condition



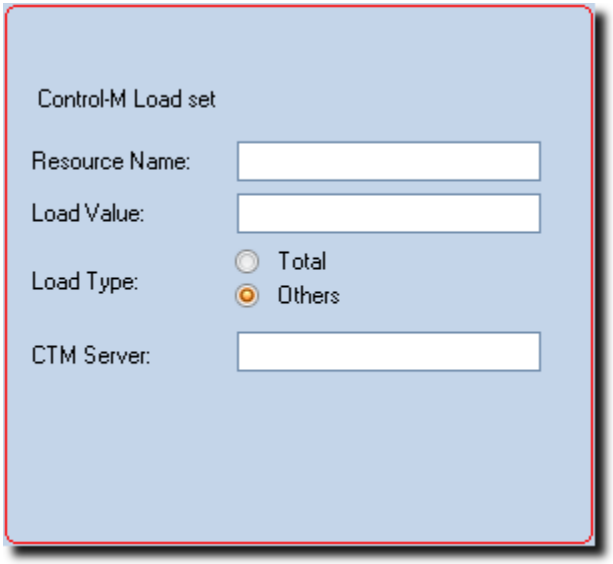
Purpose	Operations on prerequisite conditions in the CONTROL-M/Server database.	
Fields	**Action**	Add or Delete operations
	Condition Name	Condition Name
	CTM Server	Address of CONTROL-M Agent
Details	Activate **ctmcontb** utility	

6.10.16 CTM Jobs



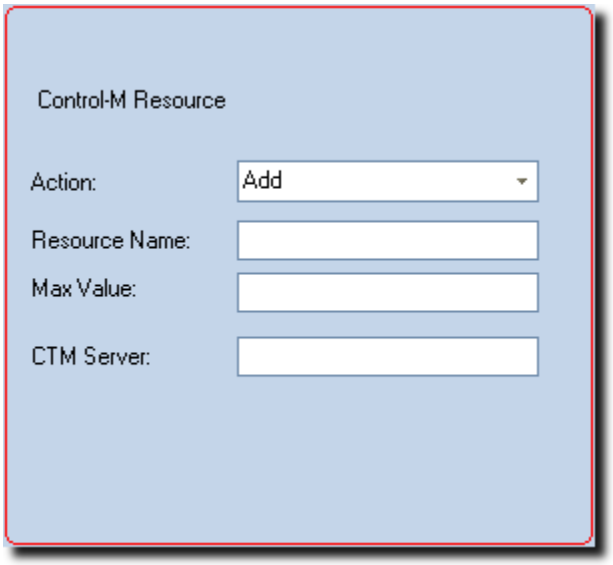
Purpose	orders or forces one or more jobs from a Scheduling table in the CONTROL-M/Server database	
Fields	**Scheduling table**	Scheduling Table name
	Jobname	Job name (or mask) of the job(s) to order or force.
	Force	Force or Order option.
	ODAT	The current working date of the computer on which CONTROL-M/Server is running.
	CTM Server	Address of CONTROL-M Agent
Details	Activate **ctmorder** utility	

6.10.17 CTM Loads set



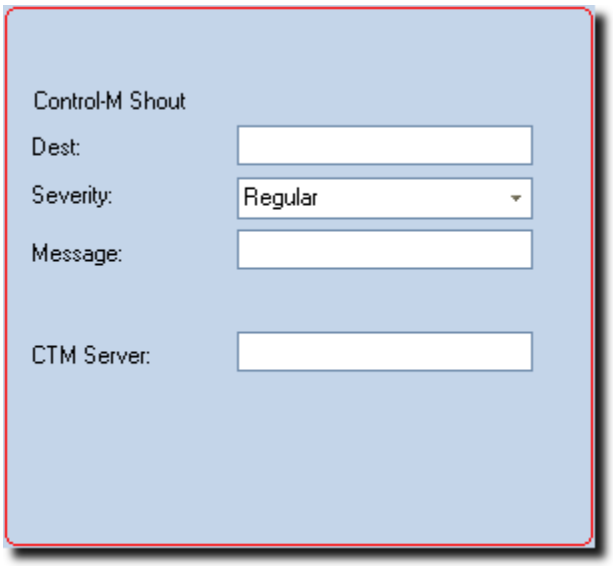
Purpose	The ctmloadset utility records current resource usage on an agent computer in the Quantitative Resources table of CONTROL-M	
Fields	**Resource Name**	Name of the Quantitative resource to update
	Load Value	Number of units of the resource currently used
	Load Type	Total or Other
	CTM Server	Address of CONTROL-M Agent
Details	Activate CONTROL-M The **ctmloadset** utility and it is part of The CONTROL-M load-balancing algorithm	

6.10.18 CTM Resource



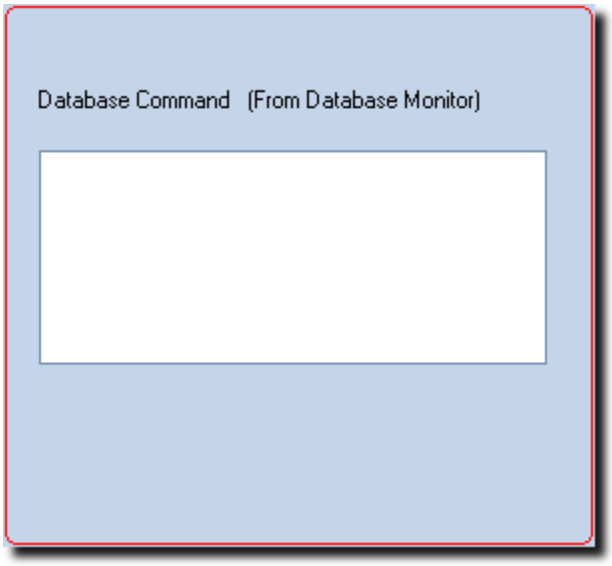
Purpose	Performs operations on the Quantitative Resources table.	
Fields	**Action**	Add, Delete or Update.
	Resource Name	CONTROL-M Resource name
	Max Value	Maximum availability for the specified resource
	CTM Server	Address of CONTROL-M Agent
Details	Activate the **ecaqrtab** utility.	

6.10.19 CTM Shout



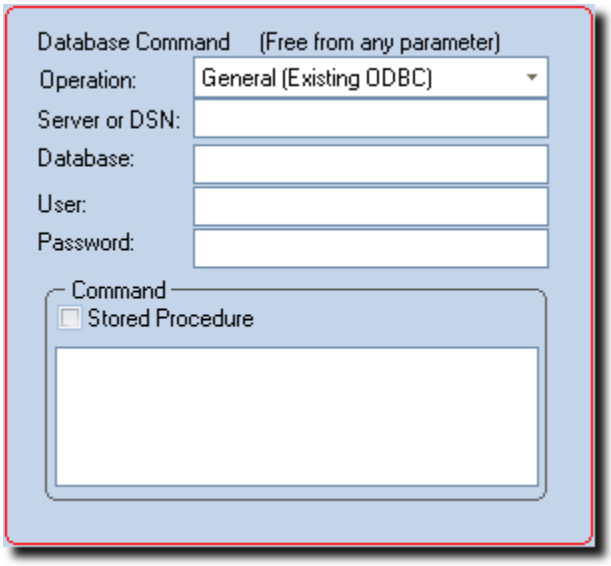
Purpose	Sends a message to the specified user or destination using the specified severity level.	
Fields	**Dest**	Destination Name
	Severity	Severity level
	Message	Message to send
	CTM Server	Address of CONTROL-M Agent
Details	Activate the **ctmshout** utility	

6.10.20 Database Command



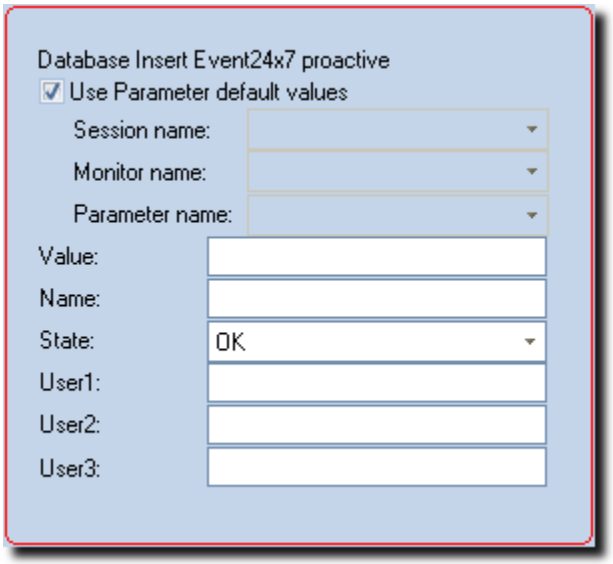
Purpose	Execute database command on the monitored session. I think this refers mostly to sql queries.
Fields	**None**
Details	The Database command is responsible for database manipulation activities (Deleting database entries, adding new ones and/or using sql to retrieve selected entries).

6.10.21 Database Command Free



Purpose	Execute database command on the monitored session, for any database and any database user.	
Fields	**Operation**	Select Database: **SQL Server** **Oracle OLE DB** **Oracle ODBC**
	Server or DSN	Server's IP or name.
	Database	Database name.
	User	Database user name.
	Password	Database password.
	Command	Command to perform on database.
	Stored Procedure	Indicate whether the Command is actually Stored Procedure
Details	The Database command is responsible for database manipulation activities (Deleting database entries, adding new ones and/or using sql to retrieve selected entries).	

6.10.22 Database Insert Event24x7



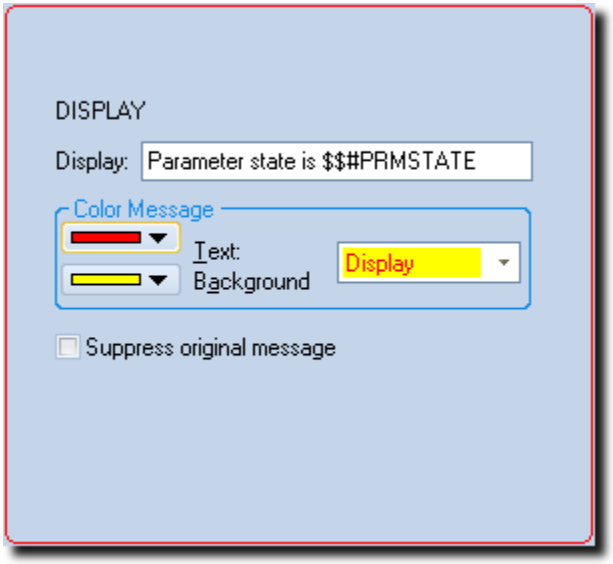
Purpose	Insert Event24x7 parameter's values and results in the database.	
Fields	**Use Parameter default value**	A checkbox indicating for Event24x7 which parameter's values will be inserted in the database – the current one or any other parameter that exists in the monitoring solution. If ticked – take current parameter.
	Session Name, Monitor Name, and Parameter	Only relevant if the above checkbox is not ticked. You select the exact location of the parameter you wish to refer to.
	Value and Name	Name of the variable to be inserted in the parameter and the desired value.
	State	Default state of selected parameter.
	User1, User2 and User3.	User variables to be used by the parameter (optional) for it's checks.

6.10.23 Database Reset

The command has no dialog

Purpose	Reset the database used.
Fields	None
Details	If for any reason the database Event24x7 is logged into in a specific session is stuck, with this command it could be reset automatically.

6.10.24 Display



Purpose	Display a message at the Focal Point.	
Fields	**Display**	Message to be displayed.
	Color Message	Set the color of the message text and background color.
	Suppress message	When checked the original event message would not be displayed on the Focal Point window. By default, every incoming event is also displayed on the Focal Point window.
Details	This establishes the capability for the parameter to display messages on the Focal Point screen during the parameter's execution. The Source column of the display message will be shown in this format: **Parameter:** followed by the Parameter name.	
Example	**DISPLAY** Current time is $$#TIME Display current time on the Focal Point using Event24x7 system variable $$#TIME.	

6.10.25 ELSE

Purpose — Add an **ELSE** clause to the **IF-THEN** clause.

Fields — None.

Details — Two lines are added to the actions command:

ELSE
ELSE-END

You can add action statements between the above lines, and these statements will execute only when the IF terms have failed.

6.10.26 ELSE Object

Purpose — Add an **ELSE-Object** clause to the **IF-Object** clause.

Fields — None.

Details — Two lines are added to the actions command:

ELSE Object
ELSE-END Object

You can add action statements between the above lines, and these statements will execute only when the IF terms has failed.

6.10.27 ELSE Parser

Purpose — Add an **ELSE Parser** clause to the **IF-THEN Parser** clause.

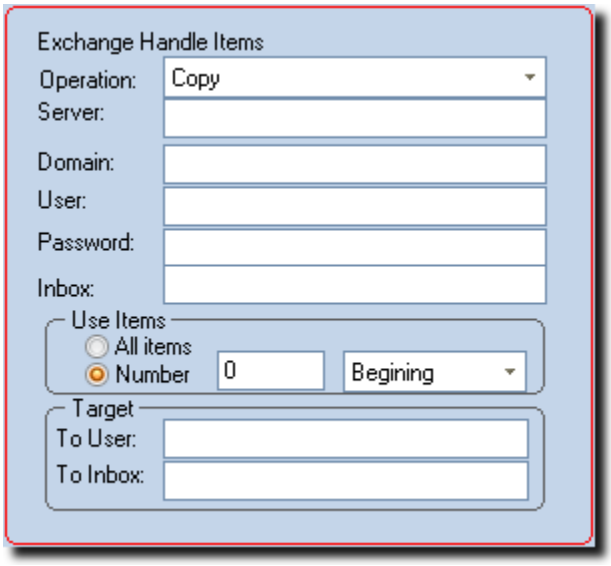
Fields — None.

Details — Two lines are added to the actions command:

ELSE Parser
ELSE-END

You can add action statements between the above lines, and these statements will execute only when the IF Parser terms have failed.

6.10.28 Exchange Move

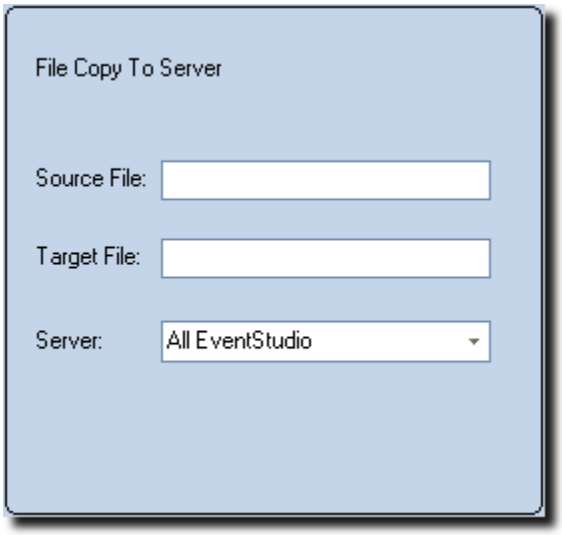


Purpose	Perform an operation on your exchange mailbox. 3 available options: Copy incoming mailbox (Inbox) with part/all messages to another mailbox (good for backup), Delete Inbox with all messages and Move inbox with messages to another mailbox.	
Fields	**Operation**	Available options: Copy, Delete or Move.
	Server	Mail Server's Name used by mailbox.
	Domain	Domain name of exchange server
	User	User name needed for logging into
	Password	mailbox.
	Inbox	Password needed for logging into mailbox.
	Use Items	Name of mailbox you want to manipulate. Which messages in the exchange mailbox to copy, Delete or Move. You can perform these operations with all messages or with a
	Target	selection you make. In case you selected the Copy or Move operations.
Details	If you select the Delete operation, the Target Group Box will be grayed out.	

6.10.29 Exit Rule

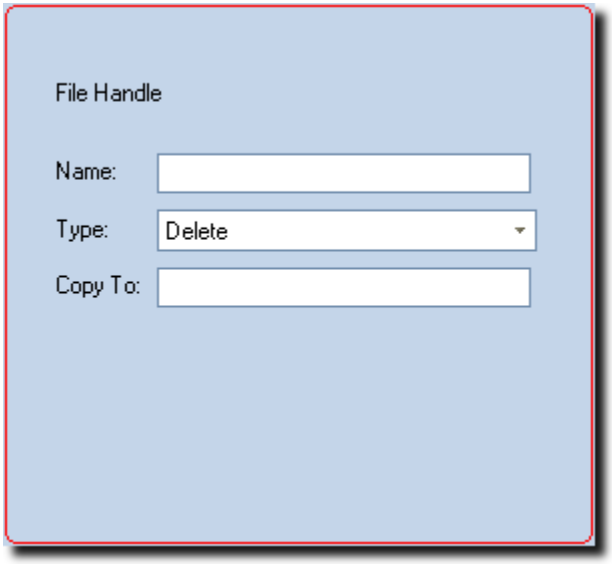
Purpose	Stop execution of the current Parameter
Fields	None.
Details	Add the following line to the actions command: When Parameter is triggered, the ACTION! commands are executed one by one from the first to the last statement. If during this process the Parameter reaches the **Exit Rule** line, it will stop execution.

6.10.30 File Copy to Server



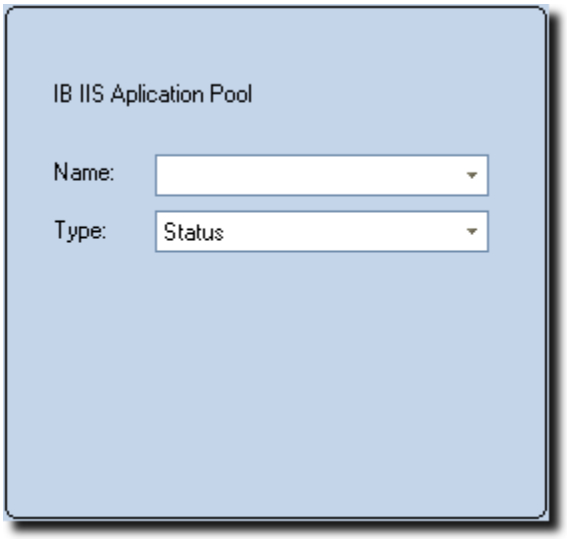
Purpose	Send file to EventStudio server.	
Fields	**Source File**	File to Send
	Target File	File name at Target server
	Server	EventStudio

6.10.31 File Handle



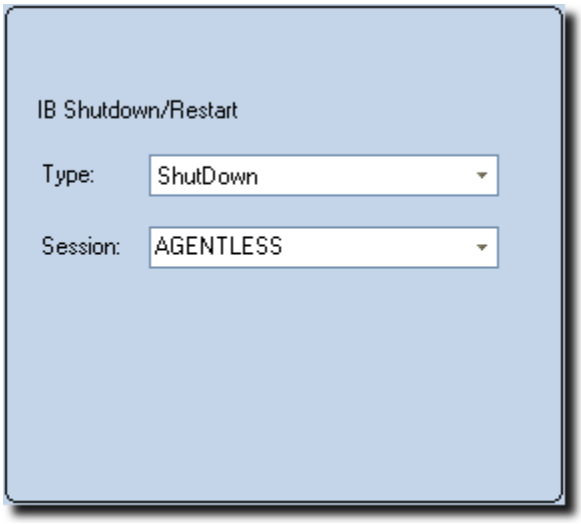
Purpose	Copy a file on the hard disk from one location to another or delete it.	
Fields	**Name**	Name of the file to be operated on.
	Type	Action to perform on this file. Can be one of two options: Delete or Copy.
	Copy To	If selected copy, this field is the destination of the copied file.

6.10.32 IB Application Pool



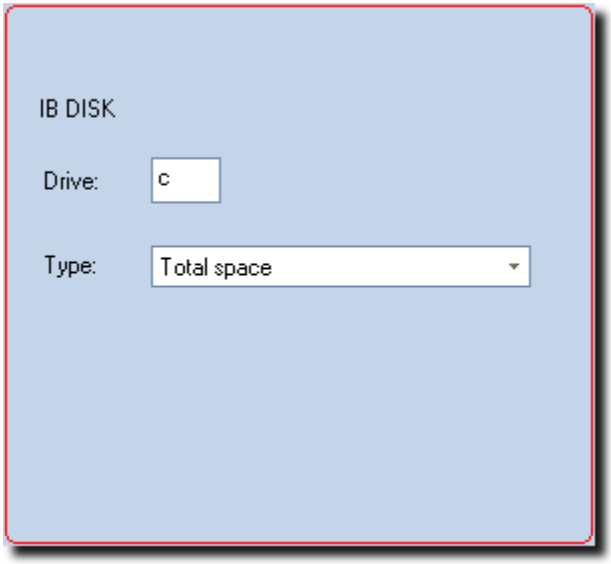
Purpose	Handle IIS application pool.	
Fields	**Name**	Application pool's name.
	Type	options: ▪ **Start** ▪ **Stop** ▪ **Status** ▪ **Recycle**

6.10.33 IB BOOT



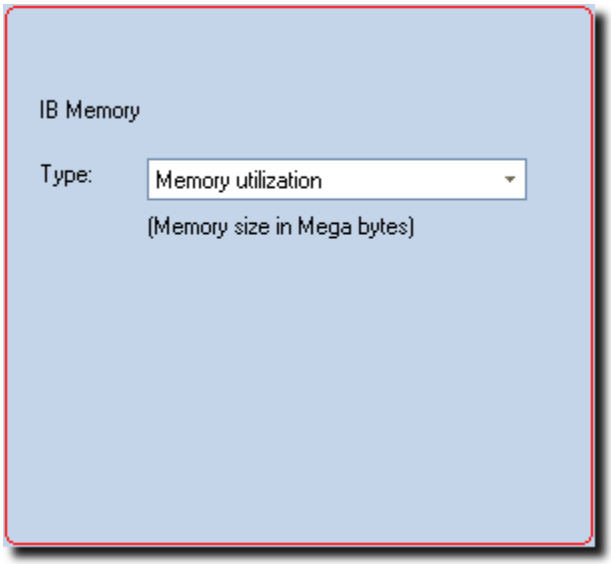
Purpose	Shutdown or restart a remote session.	
Fields	**Type**	Action to perform on the existing session. Can be one of the following: Shutdown, Restart or Win32 Shutdown options.
	Session	Select session on which to perform above shutdown or restart operation

6.10.34 IB Disk Space



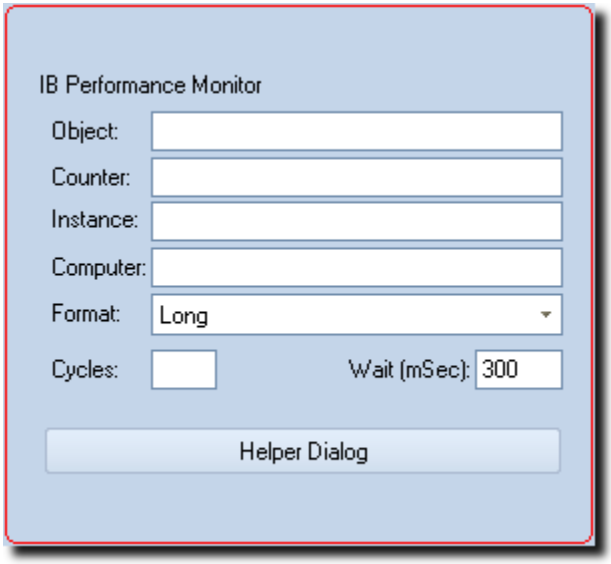
Purpose	Check Disk space.		
Fields	**Drive**	Drive letter (c, d, etc).	
	Type	Disk space check type. Choose one from the list: **Total space** **Free space on drive** **Available space to caller**	
Details	The result of the check is returned as follows: $$RC : 0-Operation failed, 1-Operation succeeded. $$VALUE : If operation succeeded, this value shows the result of the check.		
Example	**DISK Space** **Message**	Total space for c: Total Size= $$VALUE	
	Verify Total Disk Space on Drive C and display result on the Event24x7 Server Focal Point.		

6.10.35 IB Memory



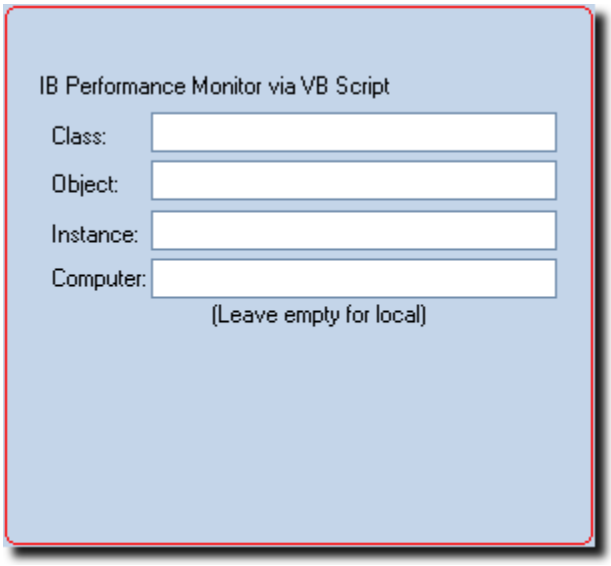
Purpose	Check various Memory statuses.	
Fields	**Type**	Memory check type. Choose one from the list: 0 - memory utilization 0-100% 1 - Total size, in bytes, of physical memory. 2 - Size, in bytes, of physical memory available. 3 - Total possible size, in bytes, of the paging file. 4 - Size in bytes of space available in the paging file. 5 - Total size, in bytes, of the user mode portion of the virtual address space of the calling process. 6 - Size, in bytes, of unreserved and uncommitted memory in the user mode portion of the virtual address space of the calling process.
Details	The result of the check is returned as follows: $$RC : 0-Operation failed, 1-Operation succeed. $$VALUE : If operation succeeded the result of the check.	
Example	**Memory** Memory utilization **IF** $$VALUE > 80 **THEN** **Message** Warning: Memory reached 80% **THEN-END**	

6.10.36 IB Performance



Purpose	Retrieve values from the Windows Performance Monitor.	
Fields	**Object** **Counter** **Instance**	Performance monitor variable. For the correct value open the performance monitor and take the values from there.
	Computer	Computer name when required remote value. For local computer leave it blank.
	Cycles	Number of times to perform rechecks in order to ensure that the result is as precise as possible.
	Wait	Time to wait in milliseconds after each check before conducting a recheck.
Details	Retrieves performance Monitor values. Has similar values as the ones you get by running the Windows Performance monitor. Type **perfmon** from the command line. You can press the **Helper Dialog** button too to assist you in selecting the exact checks to perform from the perfMon.	

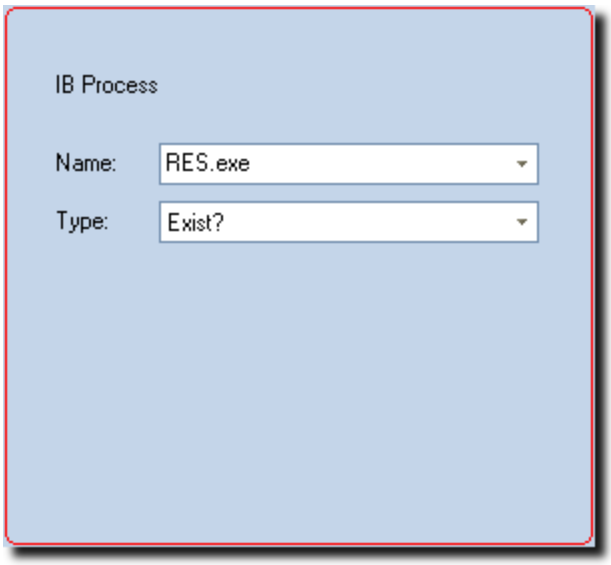
6.10.37 IB Performance VB Script



Purpose — Retrieve values from the Windows Performance Monitor via use of a VB Script.

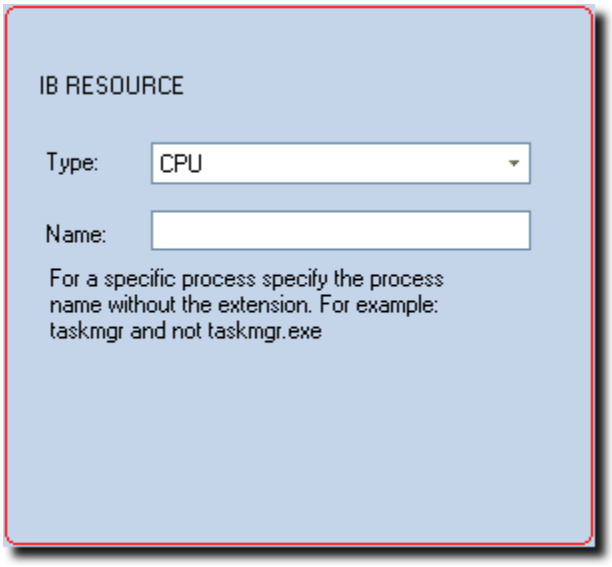
Class **Object** **Instance**	Performance monitor variable. For the correct value open the performance monitor and take the values from there.
Computer	Computer name when required remote value. For local computer leave it blank.

6.10.38 IB Process



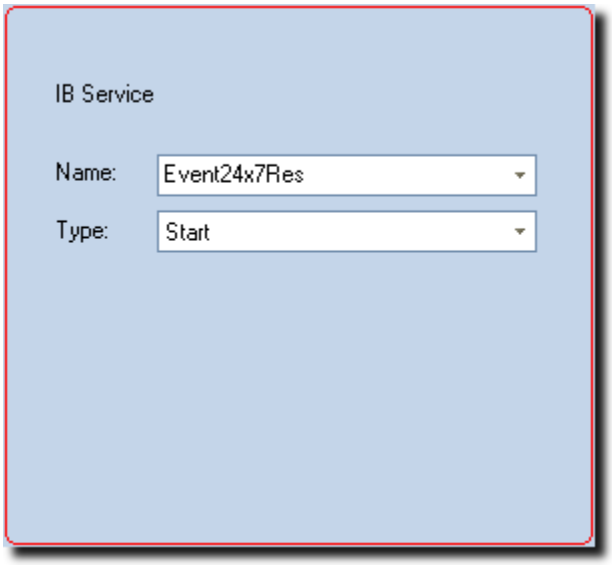
Purpose	Check Existence, Stop process or Create a new one.	
Fields	**Name**	Process Name. Expanding the combo box will bring the processes currently running on the desired RES. Choose one of them.
	Type	Type of activity: **Exist?** **Terminate** **Create**

6.10.39 IB Resources


IB RESOURCE
Type:
CPU
Name:
For a specific process specify the process name without the extension. For example: taskmgr and not taskmgr.exe

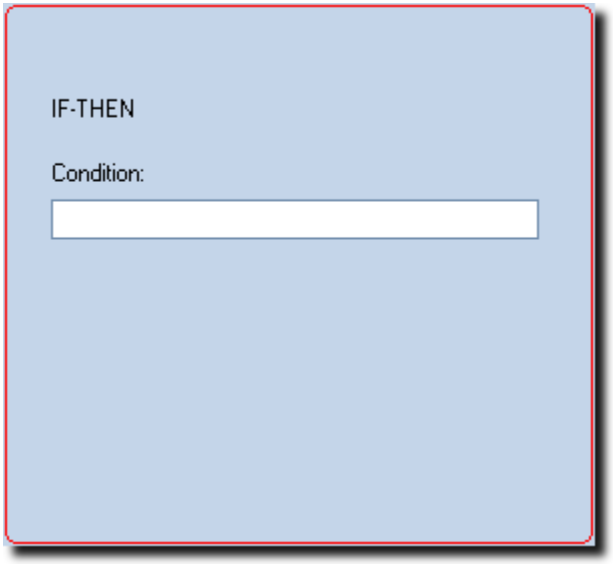
Purpose	Check various NT resources.		
Fields	**Name**	Resource name. If remains Empty, return the Total value for the entire computer.	
	Type	Chose type from a list: **CPU** **Memory** **Handles** **Threads Count**	
Details	Retrieve resources via performance Monitor.		

6.10.40 IB Service



Purpose	Handle Service activity.	
Fields	**Name**	Service name. Opening the combo box will bring the services currently running. Choose one of them.
	Type	Chose type from list: **Start** **Stop** **Status** **Restart**

6.10.41 IF



Purpose	Open an IF-THEN clause.	
Fields	**Condition**	Specify expression. If the expression is TRUE, the statements in the THEN group are executed. If the expression is FALSE, the statements are not executed, unless there is an ELSE clause upon which the statements of the ELSE clause will be executed.
Details	Add the following three lines to the actions command: **IF** expression **THEN** **THEN-END** You can add action statements between the **THEN** and **THEN- END** lines, and they will be executed only when the IF expression is TRUE.	

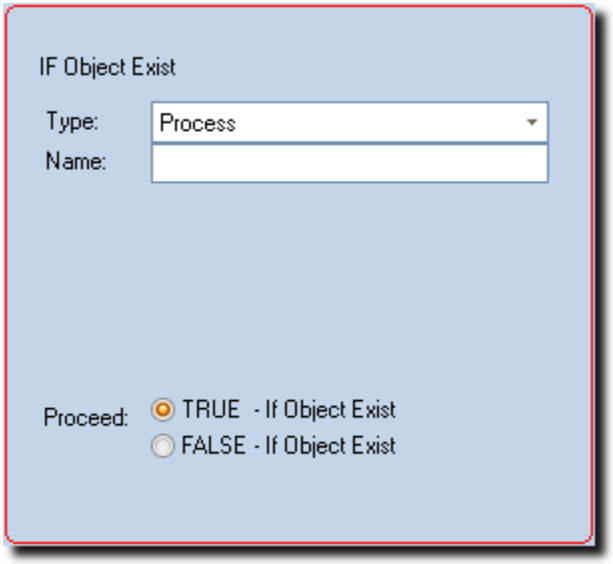
Operators:

+	Addition
-	Subtraction and unary minus
*	Multiplication
/	Division
^	Power
%	Modulo
&	Logical AND
|	Logical OR
!	Logical NOT
>, >=	Greater or equal
<, <=	Smaller or equal
!=	Not equal
==	Equal

General functions:

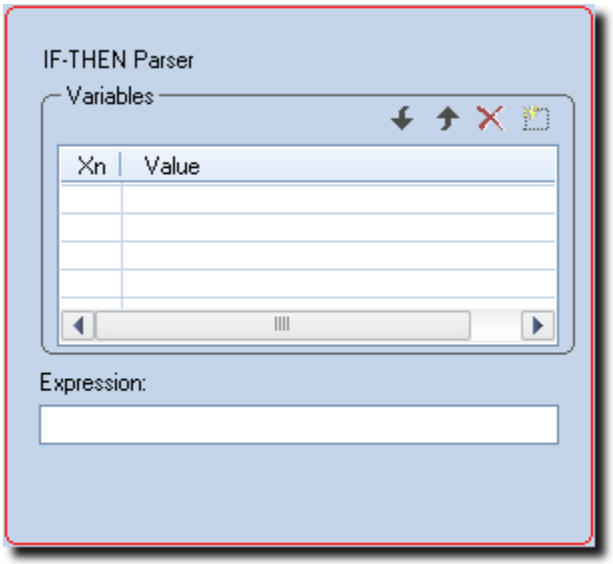
abs	fact	rand()
acos	floor	rand(min, max)
asin	hex	round
atan	if	sin
avg(x,y,z,…)	isNaN	sinh
bin	log	sqrt
ceil	log10	sum(x,y,z,…)
cos	max(x,y,z,…)	tan
cosh	min(x,y,z,…)	tanh

6.10.42 IF Object



Purpose	Open an IF-Object clause.	
Fields	**Type**	Service or Process
	Name	Object's name
	Proceed	Select True if object exists or False if object exists.
Details	Add the following three lines to the actions command: **IF Object** expression **THEN Object** **THEN-END Object** You can add action statements between the **THEN Object** and **THEN- END Object** lines, and they will be executed only when the IF expression is TRUE.	

6.10.43 IF Parser

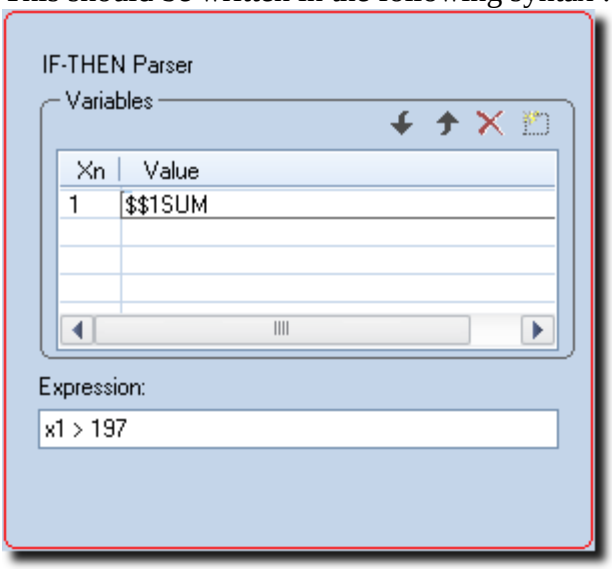


Purpose	Open an IF-THEN Parser clause. This IF clause is semi compiled for performance issues. On the first pass, Event24x7 compiles the statement into memory. From the second pass, it executes it in compiled manner. This improves dramatically the performance.	
Fields	**Xn**	Field number 1,2, …
	Value	User variable that matches the field number
	Expression	Expression to check.
Details	Add the following three lines to the actions command: **IF Parser** **THEN Parser** **THEN-END Parser** You can add action statements between the **THEN Parser** and **THEN- END Parser** lines, and they will be executed only when the IF Parser expression is TRUE.	

Example

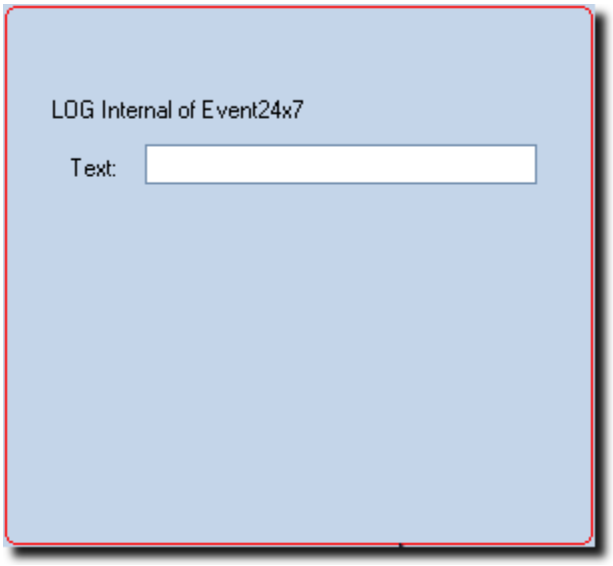
Suppose we need to check the following condition:
If $$1SUM > 197
(If user variable named SUM is greater than 197).

This should be written in the following syntax :



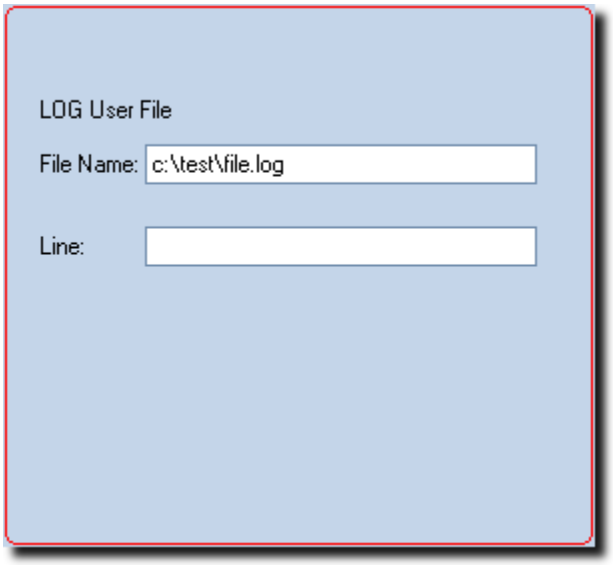
At each cycle Event24x7 will replace x1 with the current contents of $$1SUM. Then it evaluates the expression.

6.10.44 LOG Event24x7



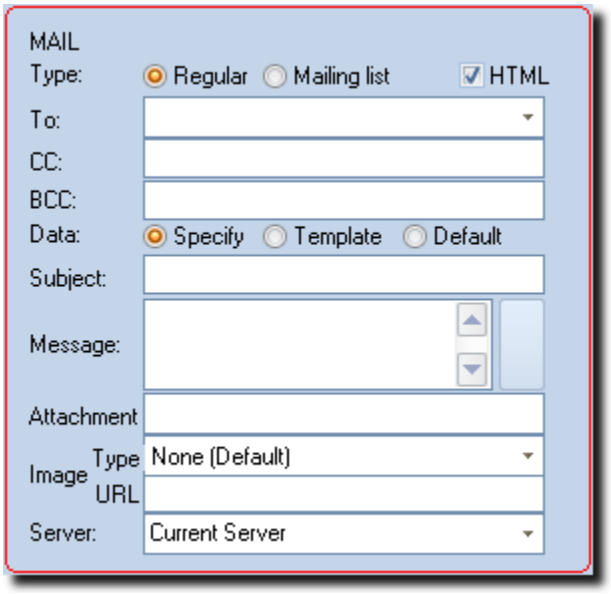
Purpose	Write a message to the CES or DES Server log file.
Field	**Text** Message to be added to the LOG file.
Details	Event24x7 Server has a log file, and every important event is written to the log file automatically. The Source part of the display message on the Focal Point appears as: **Perf:** Followed by the Monitor name.

6.10.45 LOG User



Purpose	Create and handle a User log file for debug or control purposes.	
Fields	**File Name**	Name of the User file.
	Line	Line to be added. It can contain User or System variables.
Details	Event24x7 will append a line to the specified file. If the file doesn't exist, Event24x7 will create it.	

6.10.46 Mail



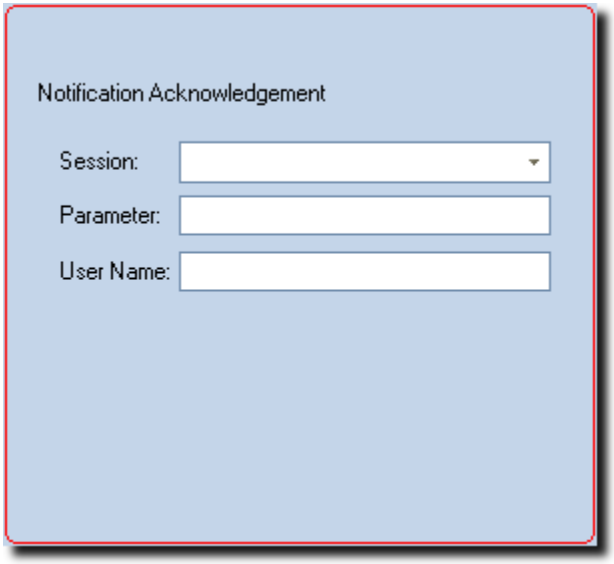
Purpose	Send email	
Fields	**Type**	Regular or Mailing List. Event24x7 Mailing list is saved in the Script Definition. For further information, please refer to the Script Definition section.
	HTML	Send mail with HTML support. • The content of the Message part will be sent in HTML heading format. • A new system variable $$#HTMLRESULTALL will print out the contents of the result (similar to $$#PRMRESULTCHECK) but with table HTML format.
	To, CC, BCC	Email addresses.
	Subject	Email subject.
	Message	Email content.

	Attachment	Optional attached file.
	Server	The mail server name.
Details	Email is sent automatically.	
	In order to send mail, two prerequisite terms must be set: • Event24x7 must have an Internet connection. • Enable Mail and the other Mail parameters must have been set successfully. This is done from the Server Configuration screen. See Mail section.	

6.10.47 Mail Status Run

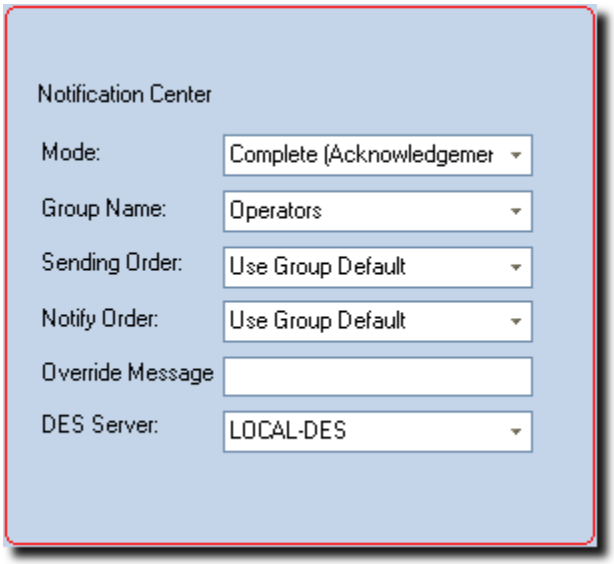
Purpose	Verify that the Parameters executed. Produces mail report that highlight parameters that were not executed during tested period of time.	
Fields	**Mail Status Script**	Entry from Script Definition that contains control definition for the result.
	DES Target	DES server name that printers related to it.
	Shout (Hours)	Highlight parameters that were not executed during the tested time.
	Filter	Filter the target parameters for the report.
	Mail To	Mail Target
	Mailing List	Whether to use Event24x7 mailing list
	Server	Event24x7's server that will send the mail

6.10.48 Notification Acknowledgement



Purpose	Set Notification Acknowledgment for a parameter.	
Fields	**Session**	Select session for the parameter.
	Parameter	Select the parameter.
	User Name	User Name
Details	This is part of the Notification System. It uses to Acknowledgment via emails. There are two ways to get an acknowledgment: By the SMS or by mails.	

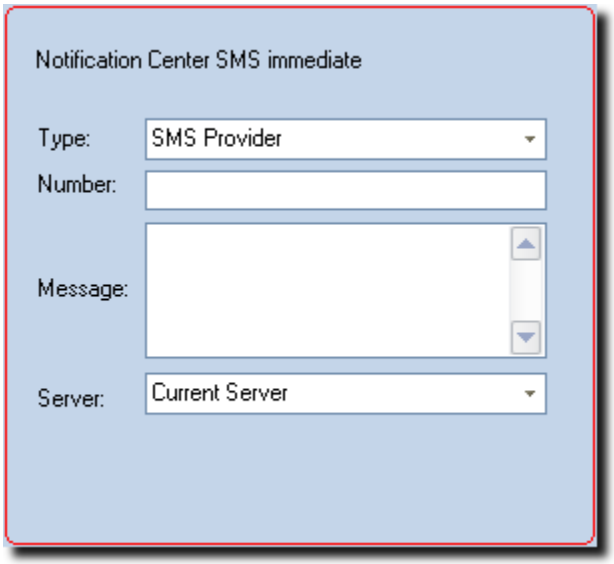
6.10.49 Notification Center



Purpose	Use Notification Center to handle the alert.	
Fields	**Mode**	Sending mode. Available options: **Complete (Acknowledgement).** **Broadcasting.**
	Group Name	Group name for sending the notification to its recipients.
	Sending Order	Sending order. Available options: **Use Group Default** **According to On Duty Calendar** **According to Weekly Calendar** **Recipient Order** **Send to all Simultaneously**

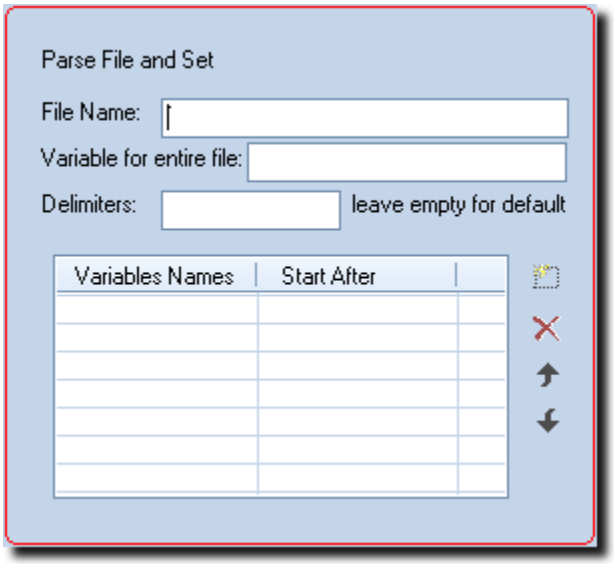
Notify Order	Notify order. Available options: **Use Group Default** **Only mails** **Mails and SMS** **Only SMS** **Start mail, Retries SMS** **Start mail, Escalation SMS**
Details	Sending notifications using Notification Center.

6.10.50 Notification SMS Immediate



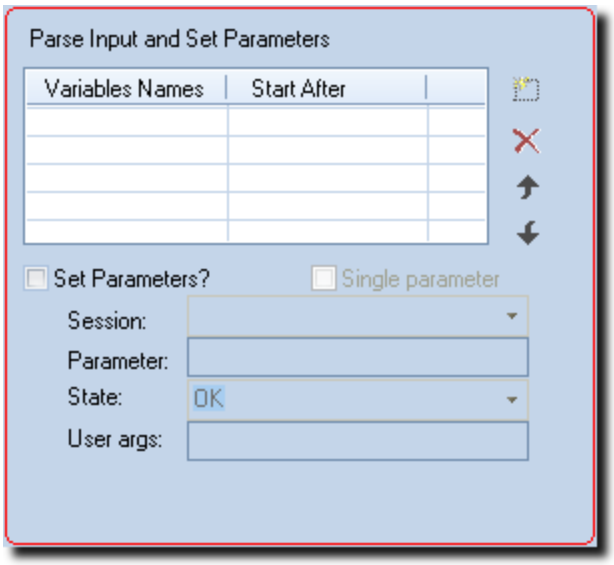
Purpose	Send immediate SMS.		
Fields	**Type**	Options: • **Notification Sending Order** • **Wireless Modem** • **SMS via Mail** • **SMS Provider**	
	Number	Recipient's number for sending the SMS.	
	Message	The message that would be sent to the recipient.	
	Server	The DES server that will be used to send the SMS.	
Details	The simplest way to send immediate SMS.		

6.10.51 Parse File and Set



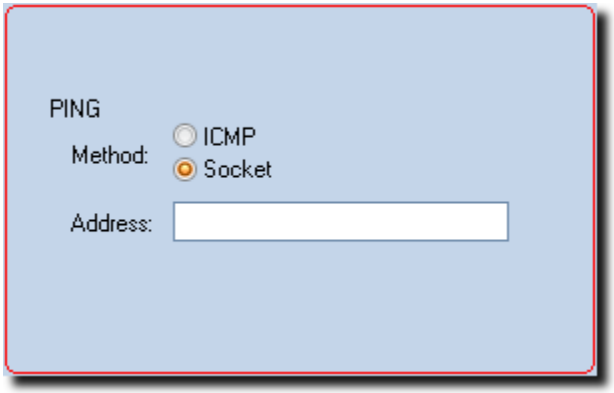
Purpose	Convert a file to variables. When the file has an internal structure of **Keyword=Value, Keyword=Value…** With this command you can create Event24x7 variables automatically.	
Fields	**File Name**	File name and path to convert.
	Variable for entire file	Variable name for the entire string in the file.
	Delimiters	List of characters that are used as delimiters between the input fields. Leave empty for default.
	Variable Names	The variable names.
	Start After	An Event24x7 search for the prefix and it creates a variable from the value that appears after this prefix.

6.10.52 Parse Input and Set



Purpose	Convert single message to parameters. When the incoming message has an internal structure of **Keyword=Value, Keyword=Value…** With this command you can create Event24x7 variables automatically. In addition, the variable can be sent to Parameters.	
Fields	**Variable Names** **Start After**	Provide the prefix and the parameter name. An Event24x7 search for the prefix and it creates a variable from the value that appears after this prefix.
	Set Parameter?	Send the variables to Parameters. (Dashboard).
	Single Parameter	If checked Event24x7 will send each variable separately to the parameters.

6.10.53 PING



Purpose — Perform Ping checks to a TCPIP address.

Fields

Method — ICMP or socket connection checks

Address — TCPIP address to check. Format of IP is nnn.nnn.nnn.nnn or DNS name.

Details — Perform ICMP or socket checks for this address.

If there is a connection to the checked address,

- $$RC variable returns 1.
- Message is written to the Event24x7 Log file containing the Hop Count. The message has severity of ERROR.

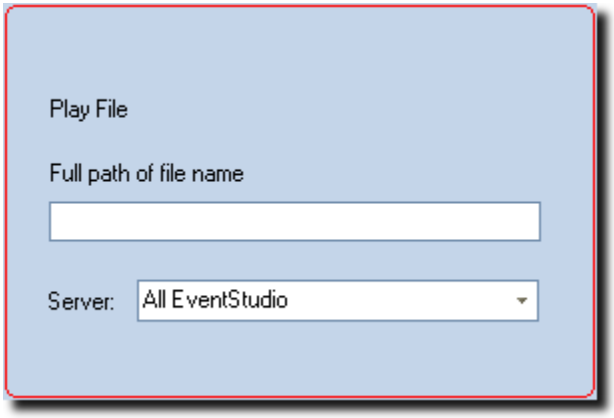
If there is no connection to the checked address:

- $$RC variable returns 0.
- Message is written to the Event24x7 Log file specifying the failure of the Ping command.

Example

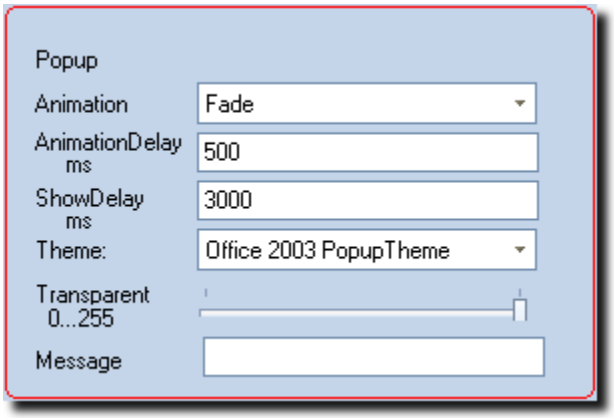
```
PING      myserver
IF        $$RC  ==  0
THEN
   DISPLAY  Not Exist
THE-END
```

6.10.54 Play File



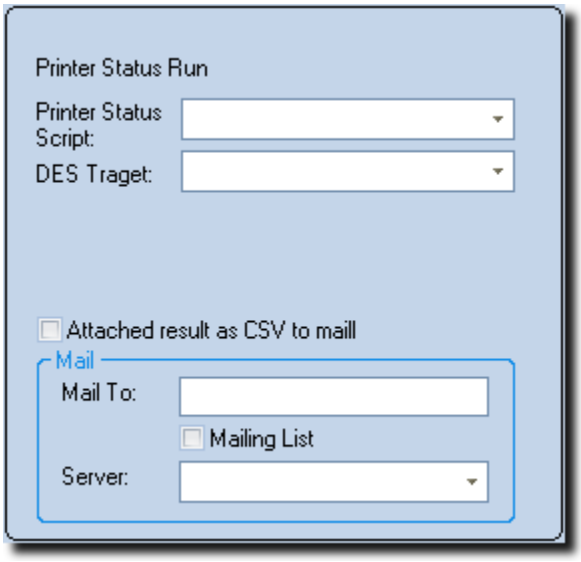
Purpose	Play audio file to get the operator's attention
Fields	**Full file name to play** **Server** - On what server to play the specified audio file. Options are: **All EventStudio, Current Server, CES Server, LOCAL-DES** and **REMOTE-DES.**
Details	Event24x7 will start the suitable program according to the file extension.

6.10.55 Popup



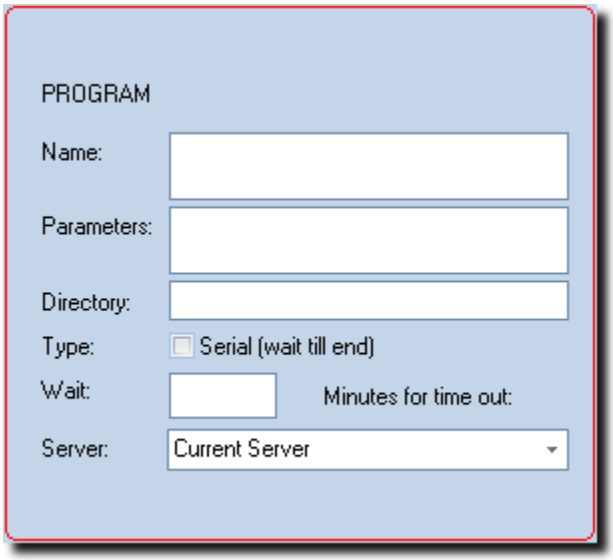
Purpose	Popup a window message on the Studio. This is one of the notification options available.	
Fields	**Animation**	Control how the popup window appears
	Animation Delay **Show Delay**	
	Theme	Type of popup window
	Transparent	Transparency of the popup
	Message	The main message to display
Details	This is similar to exchange popup window when a new mail arrives.	

6.10.56 Printer Status Run



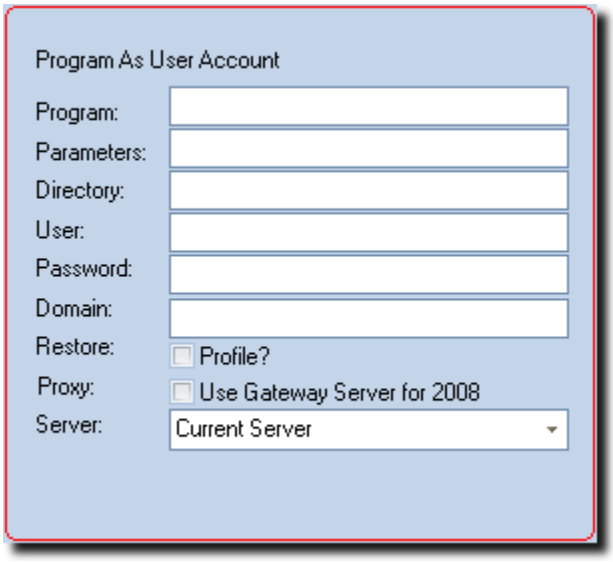
Purpose	Schedule printers counters report via mail. The format of the report determine by the Printer Status Data command from the Script Definition.	
Fields	**Printer Status Script**	Entry from Script Definition that contains control definition for the result.
	DES Target	DES server name that printers related to it.
	Attached result as CSV to mail	Optionally attached the report as CSV to the mail.
	Mail To	Mail Target
	Mailing List	Whether to use Event24x7 mailing list
	Server	Event24x7's server that will send the mail
Details		

6.10.57 PROGRAM



Purpose	Run a program on a specific server	
Fields	**Name**	Name and path of the program
	Parameters	Run time parameters for the program
	Directory	Directory path.
	Type	Tick this box, if you wish to wait until file execution ends before continuing. Otherwise, program will execute in parallel to other operations.
	Wait	When executing in Serial mode, allow time in minutes for program execution to end.
	Server	The server upon which the program will be executed. Available options: Current Server, CES Server, LOCAL-DES and REMOTE-DES.
Details	There are no specific rules how to use Name, Parameters and Directory. It is similar to using Win32 API CreateProcess.	
Example	Run program check_instant_messages, Type: serial, Wait: 2 minutes.	

6.10.58 Program As User



Purpose

Run a program under a specific user credentials.
When a program must be started with a certain user credentials like a program that reads from SQL, and the SQL authentication is Login User.

Fields

Program Name and path of the program

Parameters Run time parameters for the program

Directory Directory path.

User User name

Password Password

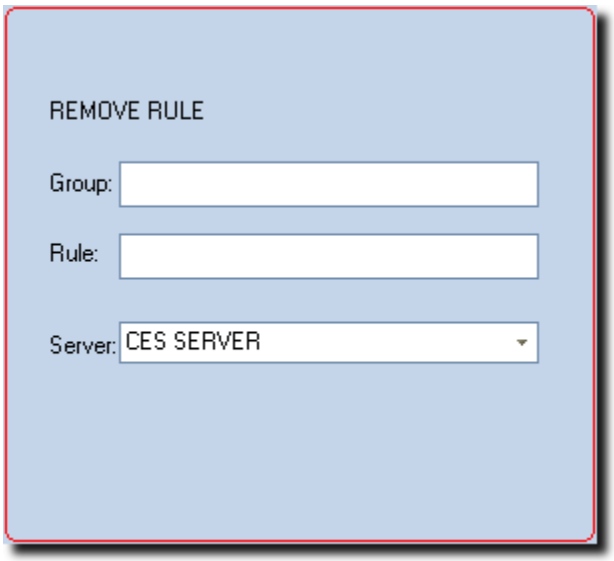
Domain Network Domain name

Restore Option to restore the User profile

Proxy Use Event24x7 Gateway for starting program.

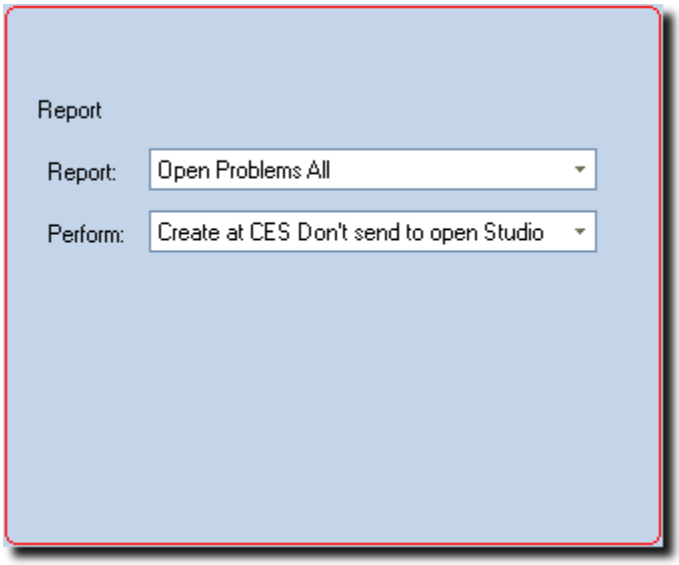
Server Event24x7 server upon which to start the program. This is transparent to the program execution within its own servers.

6.10.59 Remove Rule



Purpose	Remove single Rule or Group of Rules from the Rule System.	
Fields	**Group**	Rule Group's name.
	Rule	Rule name. If the Rule name's field remains empty the action removes the entire Group.
	Server	The Event24x7's server from which to remove the rule.
Details	Remove the rule or the entire Group from the Rules Active list. This will prevent the removed rules from being triggered. The Remove statement has the same effect as performing the Remove command from the Rule Status screen.	

6.10.60 Report

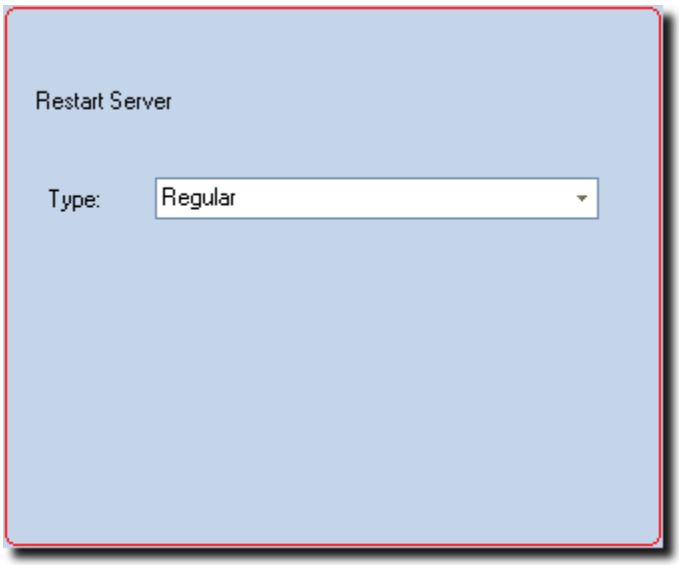


Purpose	Write a dynamic report of open problems – so one can go over it later.	
Fields	**Report**	What to report – two available options – **Open Problems (By Sessions)** – All the sessions listed one by one with a sub-list of all the open problems pertaining to each session. **Open Problems All** – All opened problems listed unsorted in no specific order.
	Perform	Where to save and/or display the results of the report specified – 3 available options: **Create at CES Don't send to open Studio** – The results are saved and updated on the CES folder but not on the EventStudio folder, thus will not be displayed on the Event24x7 Report's window.

Send Report to open Studio (Open browser) - The results are saved and updated on both the CES and the EventStudio folders as well as being automatically opened for the user in a browser window display.
Send Report to open Studio (Don't Open browser) - The results are saved and updated on both the CES and the EventStudio folders but without being displayed (You must do it yourself via Event24x7).

Details Use in case of critical or important triggers so you will keep a record of their occurrence.

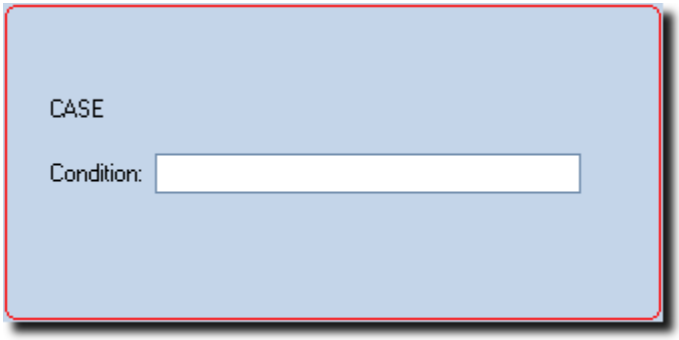
6.10.61 Restart Server



The command has no dialog.

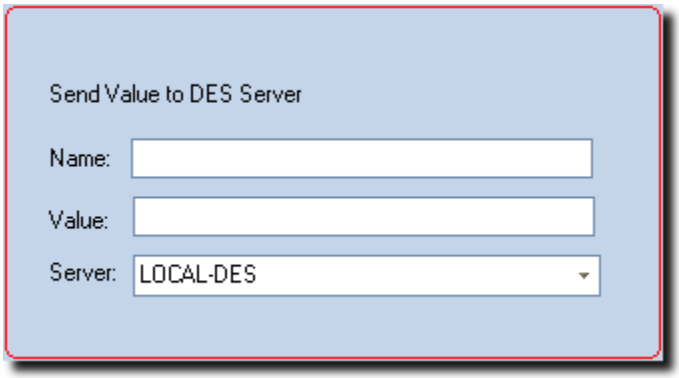
Purpose Restart the server the current session is connected to.

6.10.62 SELECT



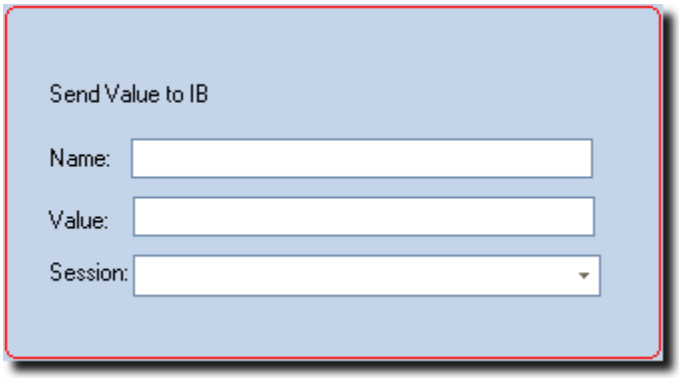
Purpose	Open a **Select** clause.	
Fields	**Condition**	Specify expression. If the expression is TRUE, the statements in the CASE group are executed. If the expression is FALSE, the next CASE expression is examined.
Details	Add the following four lines to the actions command: **SELECT** **CASE** expression **CASE-END** **SELECT-END** You can add action statements between the **CASE** and **CASE-END** lines and they will be executed only when the **CASE** expression is TRUE. You can add several **CASE** statements in the **SELECT**. Only the first **CASE** clause that it's expression is true will be executed among all the **CASE** statements.	

6.10.63 Send Server



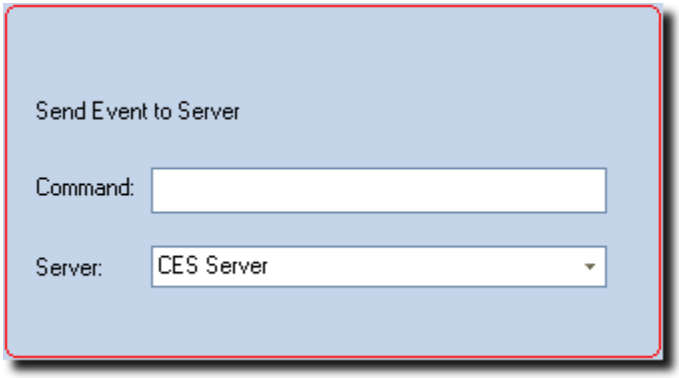
Purpose	Send a User Variable From the CES server to the DES Server	
Fields	**Name**	Variable name. Do not prefix the name with $$.
	Value	Variable value.
	Server	The Event24x7's DES server to which the User's Variable is sent to.
Details	Mechanism to pass values from CES to any one of the DES. The User Variable will have the Server scope at the DES side.	

6.10.64 Send Value



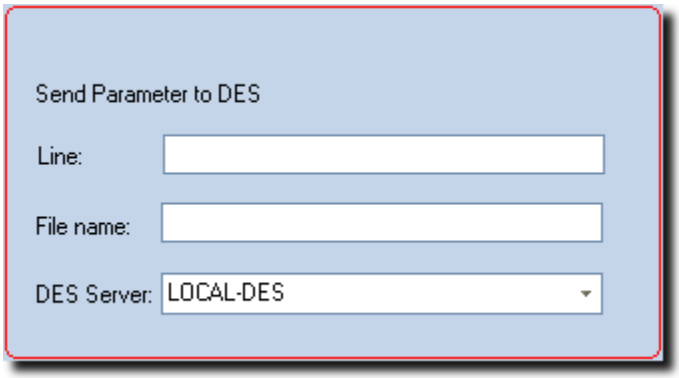
Purpose	Send User Variable From CES to DES or from the DES to the RES.	
Fields	**Name**	Variable name. Do not prefix the name with $$.
	Value	Variable value.
	Session	Agent name running on the RES machine
Details	Mechanism to pass values from CES to DES or to any one of the RESs. The User Variable will have the Server scope at the RES side.	

6.10.65 Server Command



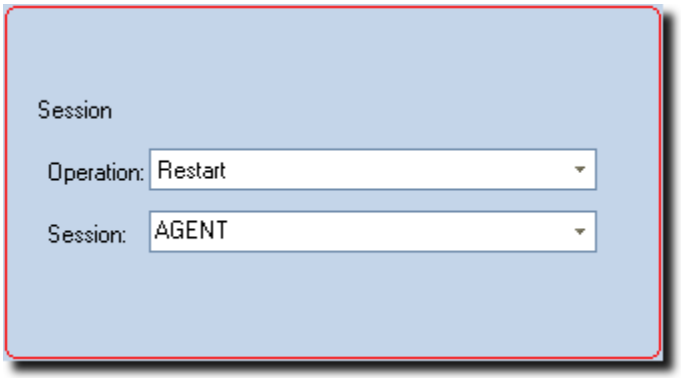
Purpose	Send Event to Focal Point	
Fields	**Command**	command
	Server	CES or DES
Details	This is the Event24x7 command line. On the CES you can type any command at the Focal Point window that might trigger a What? Command rule. Actually only CES has a real Focal Point window. The Server Command lets you act like each DES has a virtual Focal Point as a command line. Same rule with What? Command active at DES will be triggered upon this Event.	

6.10.66 Server Parameter



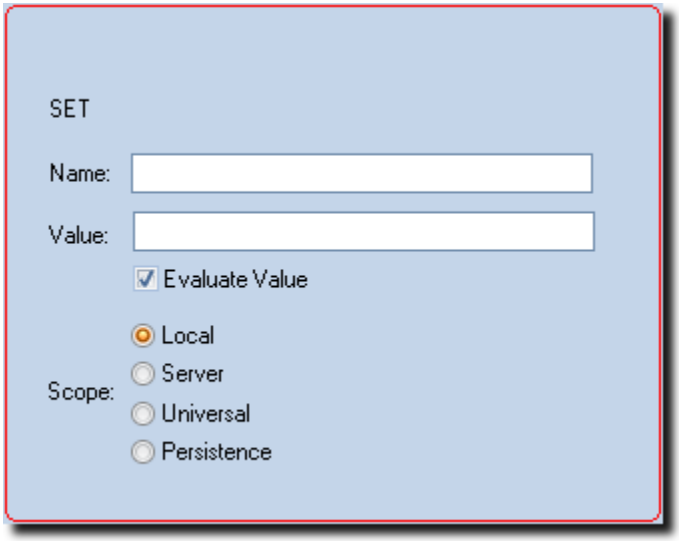
Purpose	Let Collector use values gathered by .	
Fields	**Line**	Line that contains the parameter's values.
	File name	The values are created as a file that the collector can use. Specify this same name when you define the collector that uses the Line.
	DES Server	DES name that will receive the Line.
Details	This command is used as a bridge with the Parameters system. Usually the collector performs a command or action to get some object values. The "Server Parameter" command allows use of values created by the Monitor, in the parameters.	

6.10.67 Session



Purpose	Stop / Start Session dynamically	
Fields	**Operation**	Operation options: • Restart If the session is Active close it first. Always Start the session at the end. . • Stop • Assure Active. If the session is already Active - do nothing. If the session is not active – perform Restart.
	Session	Session Name
Details	The Session command lets you Stop or Start a session from a Parameter, the same way as you do it from the Session Definition screen.	

6.10.68 Set



Purpose — Set value to an Event24x7 User Variable.

Fields

Name — Variable name.
Do not prefix the name with $$.

Value — Variable value.

Evaluate Value — Check this field when setting a numerical value. It provides the possibility to set string fields.

Scope — Variable scope.

- **Local** — Local variable lives in the scope of the parameter it is executing at. The moment the parameter's processing is terminated, the variable is destroyed. Local variables can't be accessed by other parameters.
- **Server** — Server Variables scope is limited to the server they were created on. It can be a DES or a CES server. The variable can be accessed by any parameter as long as it runs on the same server.

Universal	Universal Variables can be accessed by any parameter that runs on any server in the Event24x7 cluster.
Persistence	Guarantees that the variable's value is saved in a file every time the SET command is executed. This is done to ensure that the variable's value is not lost upon restart of the Event24x7 Application.

Details

Add a User Variable, and set it's value.
If the variable doesn't exist, Event24x7 will add it.
If it already exists, a new value is set.
When a Global variable is set, the variable can be viewed from the Variable Status screen. See Special Variables and Variables Status sections.

Example

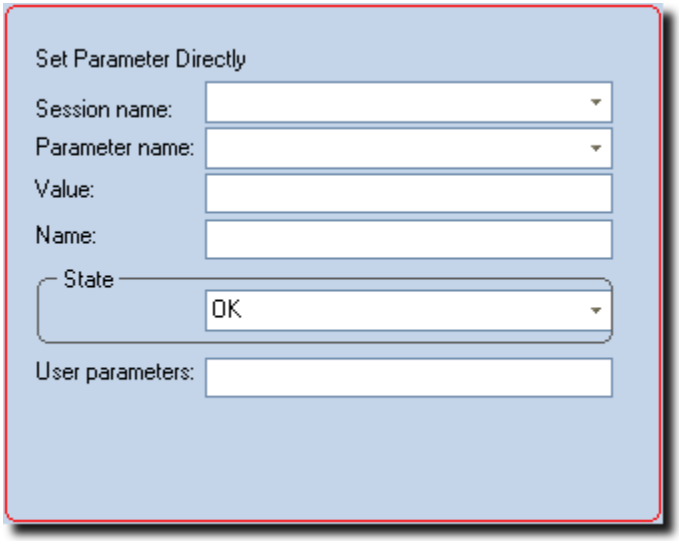
For cases that a counter is required. To increase such a counter, the user must enter the following data in the screen above:

Name: COUNTER
Value: $$1COUNTER + 1
Scope: Local

The Name field doesn't contain the $$ sign.
Event24x7 knows that it's related to User Variables.

The Value field must contain the $$1 to tell Event24x7 to take the current value of the Local User Variable COUNTER and increase it by one.

6.10.69 Set Parameter



Purpose

Send Value directly to Parameter.
It is used with a Collector that is defined as “Disable When?” (This disables the parameter from being performed every cyclic interval but only when the monitor containing this action is triggered).
It means that the Collector doesn’t collect data. The parameter retrieves data from an external source: this monitor or another parameter.
This statement sends a direct value to the Parameter. The Parameter isn’t initiated by the Collector but only upon the arrival of this command.

Fields

Session Name — The Parameter’s Session name.

Parameter Name — Name of the Parameter

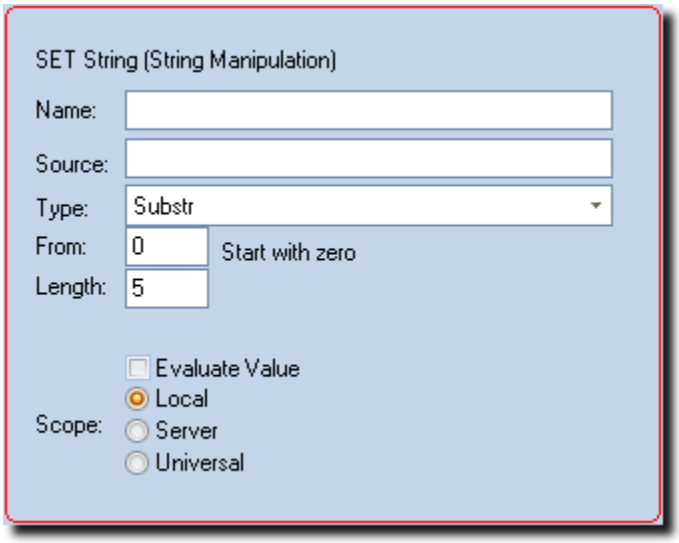
Value — The Parameter’s Value

Name — The Name field of the value.

State — Set the Parameter’s state. It can be set it in advance to OK, Warning, Error or Severe.
It can also be set to “Use Parameter State? Tab” and then the parameter itself will set the state according to the State? Evaluation.

User Parameters — Can pass user arguments as input to the parameter. It can be used at the Parameter’s side as $$#WORD1, $$#WORD2, etc.

6.10.70 Set String



Purpose

String Manipulation.

It takes an existing Event24x7 variable (System or User) as input and lets you create a new variable by applying string manipulation.

Fields

Name Event24x7 variable name that is used as input.

Source Name of the Parameter.

Type Action type:
Substr
Left
Right
Before String
After String
Before Delimiter
After Delimiter

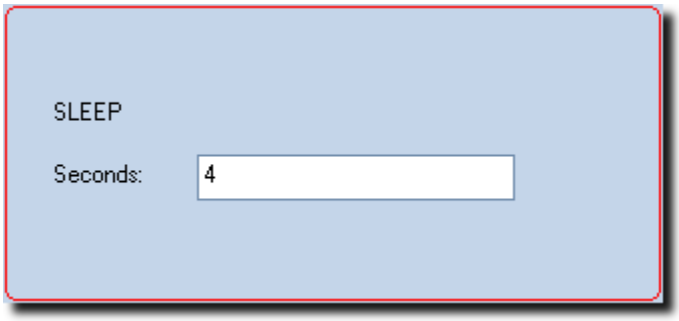
From
Length Position where to start and the length of the target

Evaluate Value Check this field when setting numerical values. It provides the possibility to set string fields.

Scope Variable scope.

Local	Local variables live in the scope of the parameter they are executing at. The moment that the parameter's processing is terminated, the variable is destroyed. Local variables can't be accessed by other parameters.
Server	Server Variables scope is limited to the server they were created on. It can be a DES or CES server. The variable can be accessed by any parameter as long as it runs on the same server.
Universal	Universal Variables can be accessed by any parameter that runs on any server in the Event24x7 cluster.

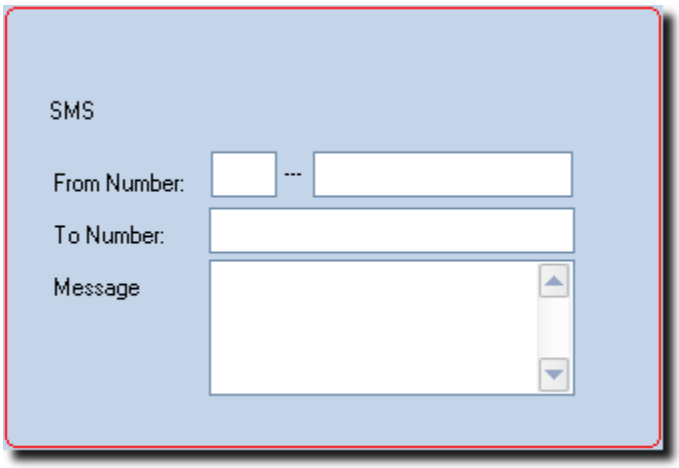
6.10.71 Sleep



Purpose Delay parameter execution.

Fields **Seconds** Delay seconds.

6.10.72 SMS



Purpose Send SMS messages.

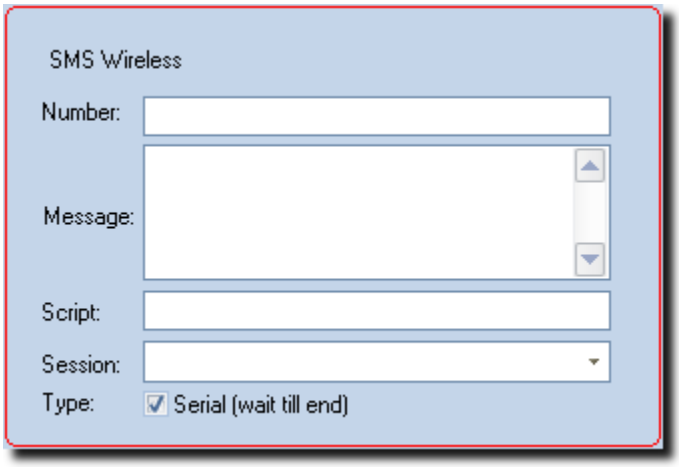
Fields **From Number** Sender

To Number Target of the message

Message SMS message body

Details Send a SMS message.
Sending SMS is based upon SMS2U package.
You have first to acquire the SMS2U licenses.

6.10.73 SMS Wireless



Purpose — Send SMS via cellular modem.

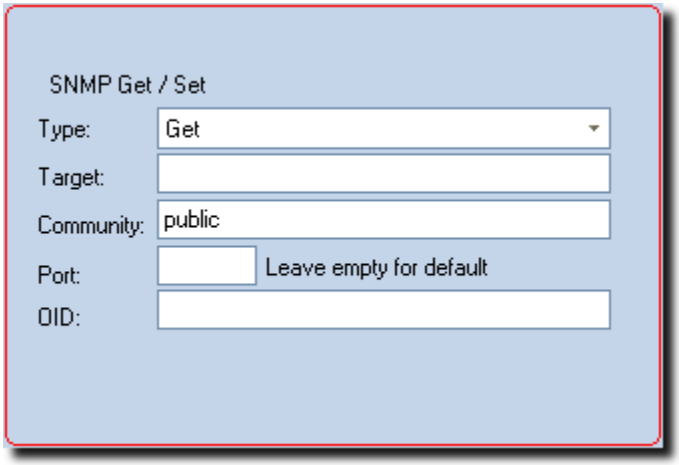
Fields

Number	Sender
Message	SMS message body
Script	Event24x7 script that defines the protocol Event24x7 should use in order to send the SMS.
Session	Event24x7 Session name for the cellular modem.
Type	Option of serial sending the SMS. In this way it is possible to check the return code for success.

Details — The advantage of using a cellular modem is by the fact that it doesn't need internet to send the SMS.

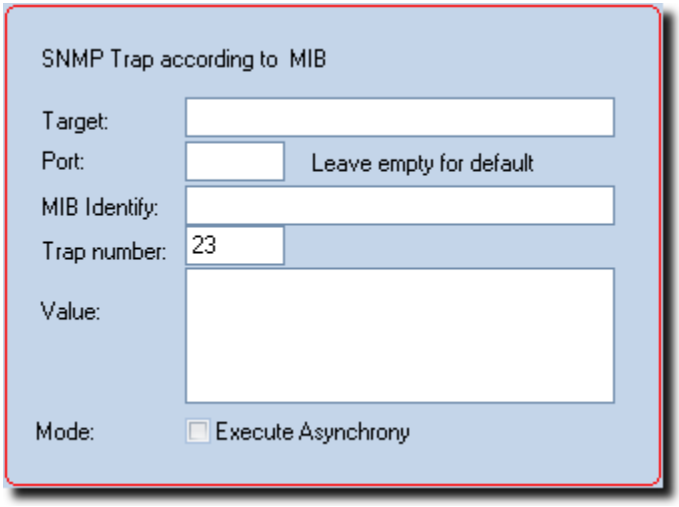
It is based upon a cellular modem that is connected to Event24x7 via a serial connection.
You have first to define the Serial session in Event24x7 that connects to the cellular modem, and then define the script that tells Event24x7 the AT commands required to handle the SMS.
Please look at the **Siemens** script that defines how to use a Siemens **MC45** cellular modem.

6.10.74 SNMP Mib Interactive



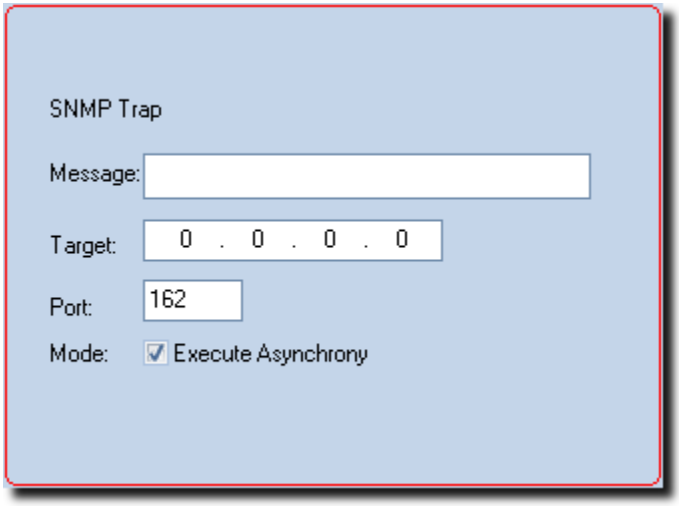
Purpose	Get or Set SNMP mib object	
Fields	**Type**	Type of request: Get or Set
	Target	IP address of the target.
	Community	
	Port	Port number. Default port number is 162
	OID	Object Identifier of Get or Set

6.10.75 SNMP Mib Trap



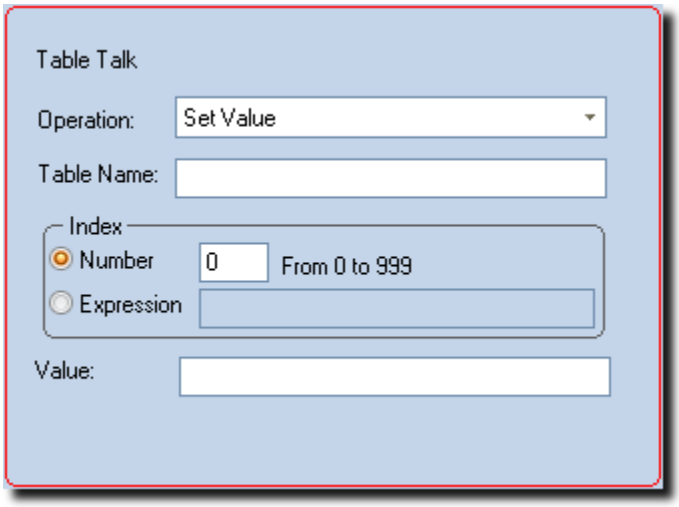
Purpose	Send SNMP Trap according to Mib	
Fields	**Target**	IP address of the target.
	Port	Port number.
	Mib Identify	Mib name taken from Mib Definition screen
	Trap Number **Value**	Values of the trap according to the mib. Values should be separated by commas.
	Mode	By default, sending of SNMP is done synchronously by Event24x7 - one by one. Checking the Mode field will cause Event24x7 to open a new process for sending the trap and as a result it will be done asynchronously.

6.10.76 SNMP Send Trap



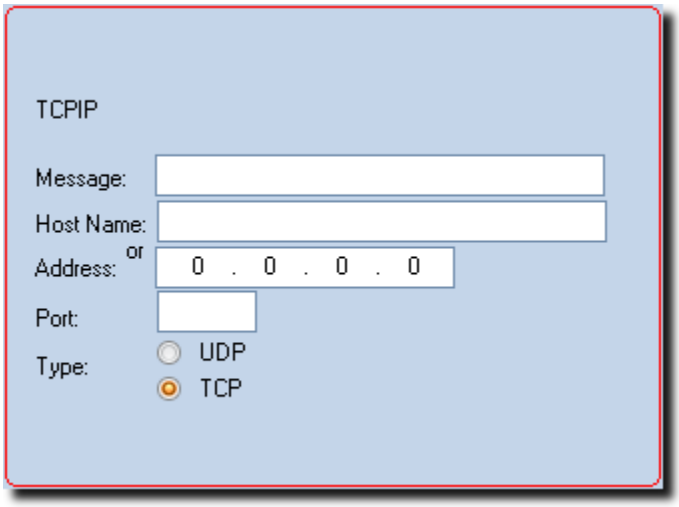
Purpose	Send SNMP Trap message.		
Fields		**Message**	Message to send.
		Target	IP address of the target.
		Port	Port number.
		Mode	By default, sending of an SNMP message is done synchronously by Event24x7. Checking the Mode field will cause Event24x7 to open a new process for sending the message and as a result, it will be done asynchronously.
Details	Send SNMP message. The SNMP well known port is 162. You can override the Port by a different one.		

6.10.77 Table Talk



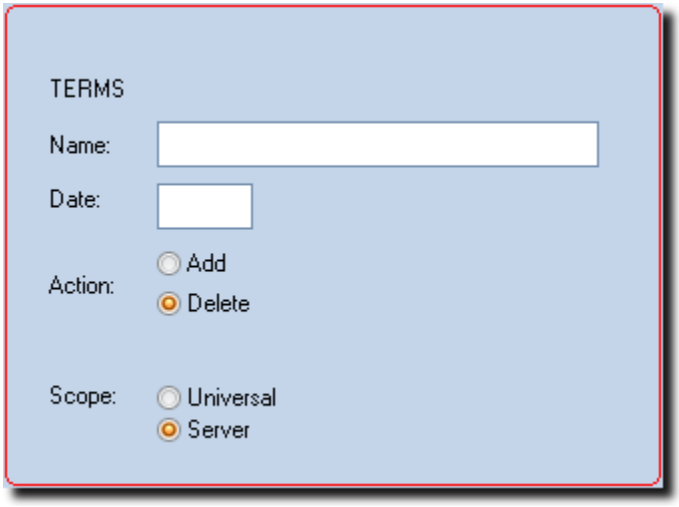
Purpose	Lets you manage dynamic arrays in the memory directly from the Action! Or State? tabs. You can store values, perform adding and subtraction, get Totals, Minimum, Maximum and Average on the fly.	
Fields	**Operation**	One of the following: Set Value Increase Decrease Get Value Total Min Max Average
	Table Name	Array name.
	Index	Array entry from 0 to 999.
	Expression	Option to calculate the array entry on the fly
	Value	Value.
Details	This feature helps you maintain counters.	

6.10.78 TCPIP



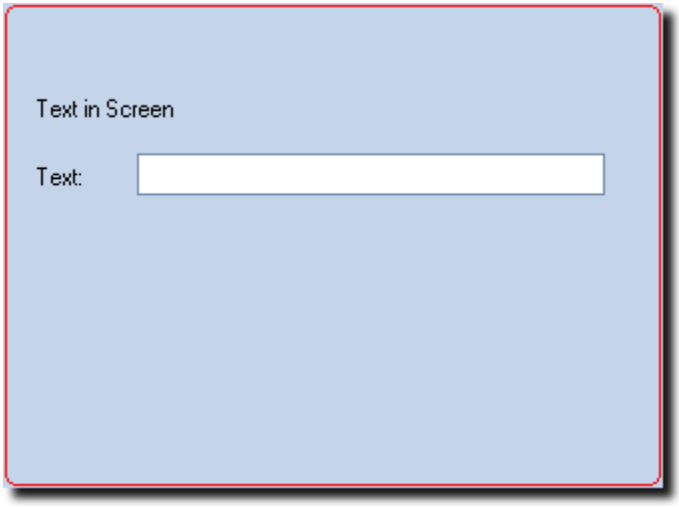
Purpose	Send TCPIP packet.		
Fields	**Message**	Message to send.	
	Host Name	DNS name of target location.	
	Address	IP address of target location.	
	Port	Port number.	
	Type	Protocol type:	
		UDP	User Datagram Protocol (UDP)
		TCP	Transmission Control Protocol (TCP)
Details	The UDP connectionless datagram delivery service is unreliable because it does not guarantee data packet delivery and no notification is sent if a packet is not delivered. Also, UDP does not guarantee that packets are delivered in the same order in which they were sent. TCP is the default.		

6.10.79 Terms



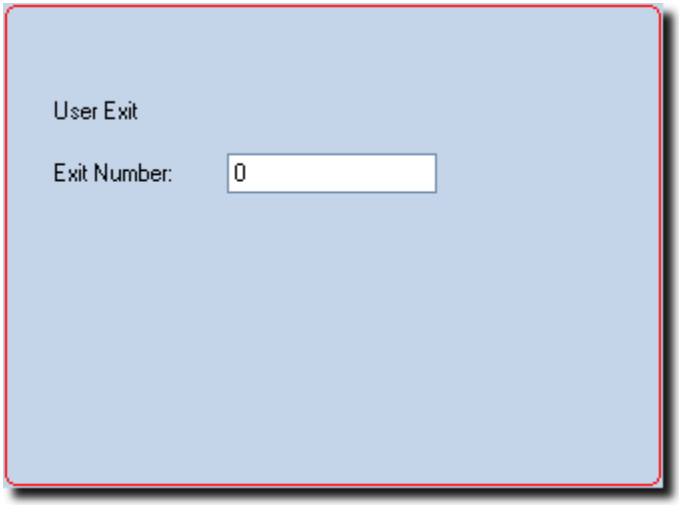
Purpose	Add or Remove a Term.	
Fields	**Name**	**Term** Name
	Date	Term Date is in the format of MM/DD. This is an optional field, and if it is not present, it is treated as dateless.
	Action	Type of action. **Add** – Add Term. **Delete** – Remove Term.
	Scope	**Server –** Effective within the scope of the same server they were created on **Universal –** Effective in the entire Event24x7 namespace.
Details	A Term can be established as a criteria for triggering a Parameter.	

6.10.80 Text In Screen



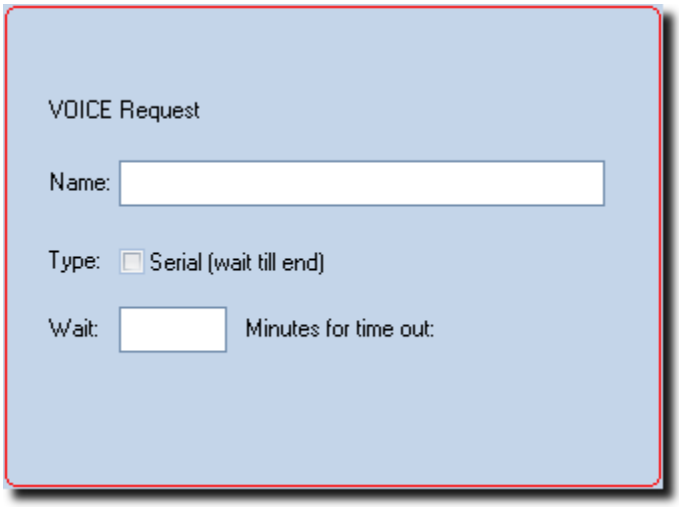
Purpose	Search for a specific text in the Session's terminal.	
Fields	**Text**	Text string that you are searching for.
Details	Use for Scripts to handle in automatic login. For example, you might wish to search for a requested user name before entering the user name: If text is found on the screen, then $$RC is set to 1. If it isn't found, $$RC is set to 0.	

6.10.81 User Exit



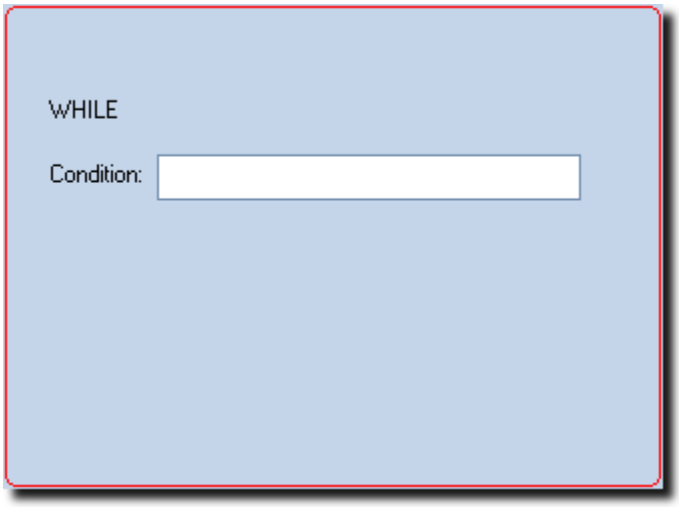
Purpose	Execute a DLL or a specific DLL function at this point in the Action! Tab. The details of this DLL or DLL function name are specified one level up in the parameter's Collector in it's Execution Tab.	
Fields	**Exit Number**	Acts as an identification number for the executing DLL.
Details		

6.10.82 VOICE



Purpose	Send a Voice Request to the EventVoice for execution.	
Fields	**Name**	Voice Definition script.
	Type	Tick this box, if you wish to wait until the script file execution ends before continuing. Otherwise, the program will be executed in parallel to other operations.
	Wait	When executing in Serial mode, allow time in minutes for program execution to end.
Details	Voice request might have a Return Code. Special system variable **$$RC-VOICE** holds the return code.	

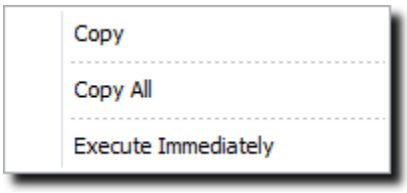
6.10.83 WHILE



Purpose	Open a WHILE clause.	
Fields	**condition**	Specify expression. If the expression is TRUE, the statements in the WHILE group are executed. If the expression is FALSE, the first statement after the WHILE-END clause is executed next.
Details	Add the following two lines to the actions command: **WHILE** expression **WHILE-END** You can add action statements between the **WHILE** and **WHILE-END** lines, and they will be executed only when the WHILE expression is TRUE.	

6.11 Mouse right button

Select a line from the action list and press the right mouse button key.
A popup menu will be displayed:



That performs the following:

Copy	Copy the select line into the memory. If the selected line is part of a clause command (like IF-THEN-ELSE, WHILE, etc), the whole clause command will be read into the memory.
Copy All	Copy all the lines into the memory.
Execute Immediately	Execute the current action! tab. Usually, the action! tab is executed only when it is active and the state of the parameter was changed to the state of the current tab. This option forces Event24x7 to execute this Action! immediately as though it's state was changed. This let you check the outcome of the Action! part.

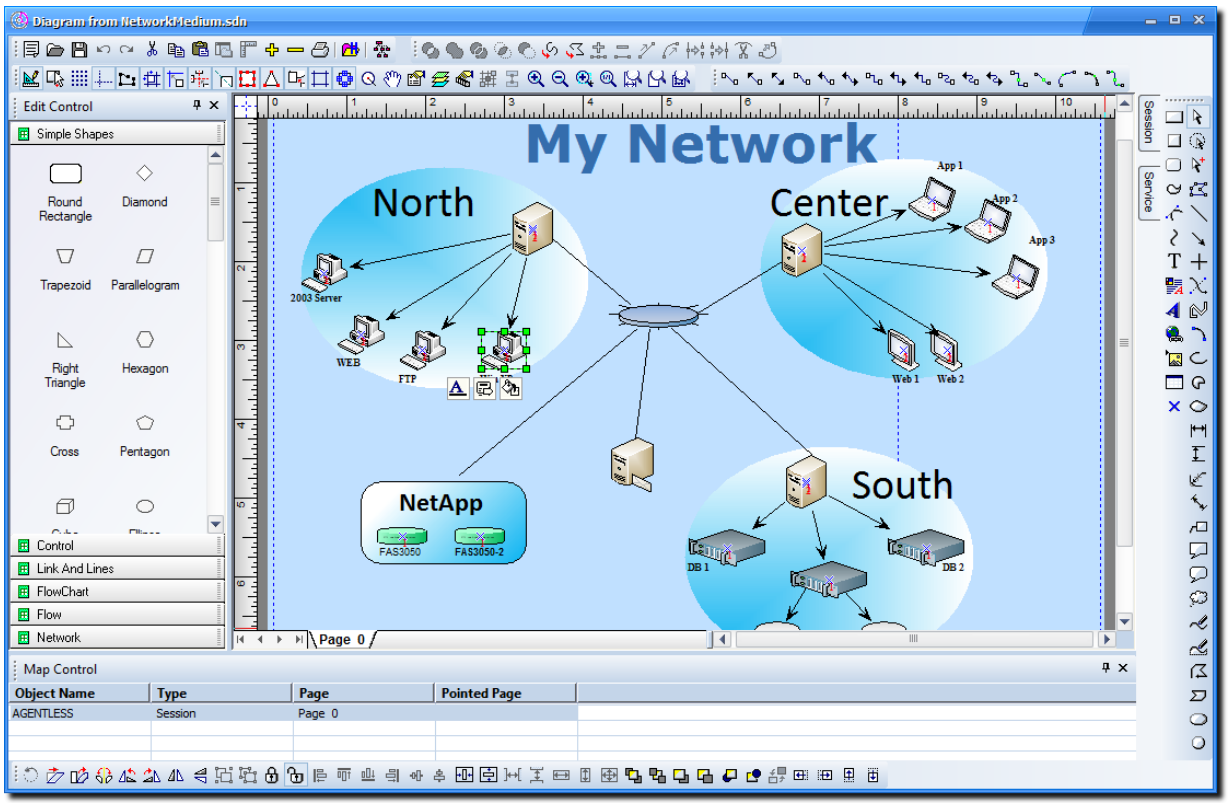
7. Diagrams

Diagram is the highest layer display view which looks down on all others. It contains state of the art Visio like graphic user interface to display the network in a graphical way. Event24x7 take the various activities of its engines and update the Diagram automatically to reflect the current status of the network components.

The Diagram tool has two components:

- Diagram Definition to create the Visio like graphical presentation of the network.
- Using the Diagram defined in the previous step to present the current network statuses.

7.1 Diagram Definition



Use the Diagram definition to create the diagram shape that reflects the network structure. The center of the screen is the canvas that holds the shapes that represent computers of the network. You can copy & Paste a shape on the canvas. You can Paste shapes from any source. If you have Microsoft Visio you can copy a shape from Visio and paste it on the canvas.

When you finish designing your diagram, save it to be used at runtime.

7.1.1 Tools to create diagrams

The Diagram definition provides many sophisticated tools for creating the diagram that suites you the most.

7.1.1.1 Edit Control

The Edit Control Located at the left side of the screen. It is used as a container of a variety of shapes. Select a shape from one of the tabs and drag and drop it over the canvas.
There are two types of shapes:

- Simple shapes.
  Any one of the first five tabs like Rectangles, Diamonds, etc.

- Composite shapes
  Shape that were brought from external resource, usually assembled from several simple shapes.
  You can create your own shapes by combing or removing several shapes.

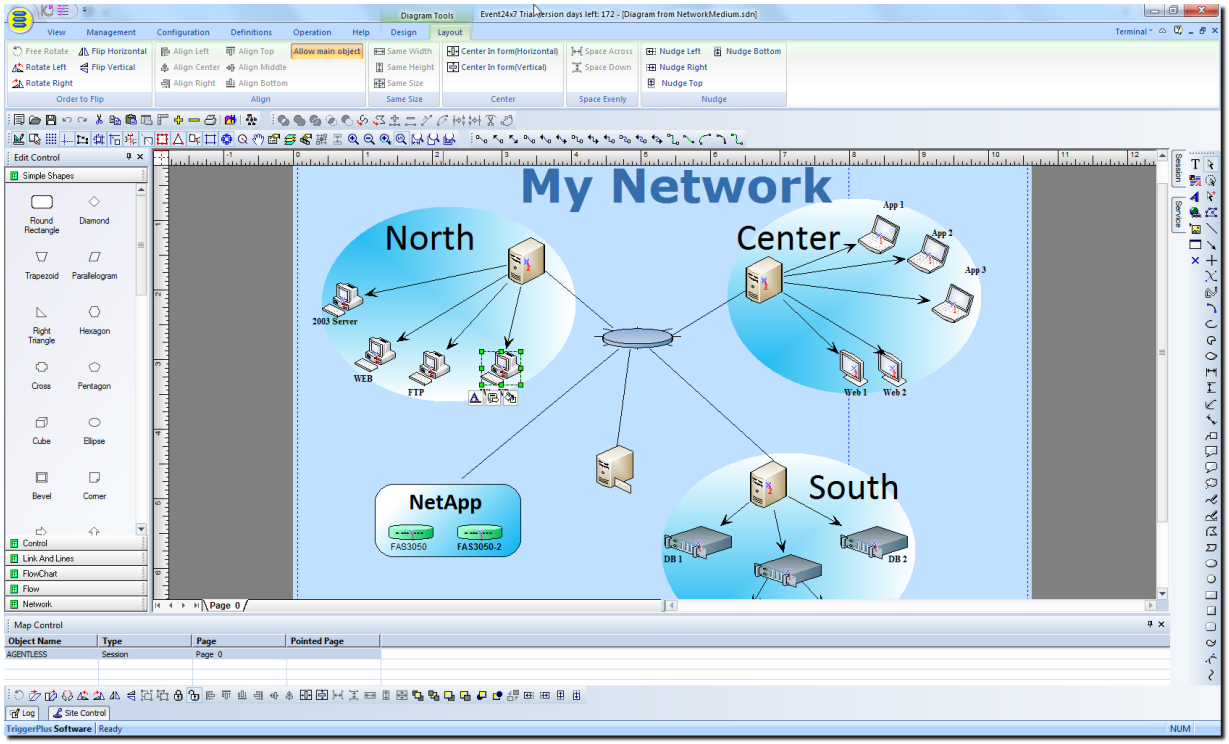
Common used external shape can be kept at the Edit Control. You can paste a shape on the Edit Control to let Event24x7 keep it to be part of the Edit Control shapes.

7.1.1.2 Tool bars

There are six different toolbars around the canvas that assist you in getting the required result. The Toolbars help you to format, Align, create shapes and manipulate them.

7.1.1.3 Main Menu

The Event 24x7 Main Menu is a sensitive one. When you open the Diagram Definition window or select the Diagram Definition, a sensitive Diagram Tolls is open at the Main Menu.



The added menu contains several useful options.

Page Setup command lets you control the size of the canvas.

Form Setting lets you control the background color and effects of the canvas.

7.1.2 Link between shape and computer

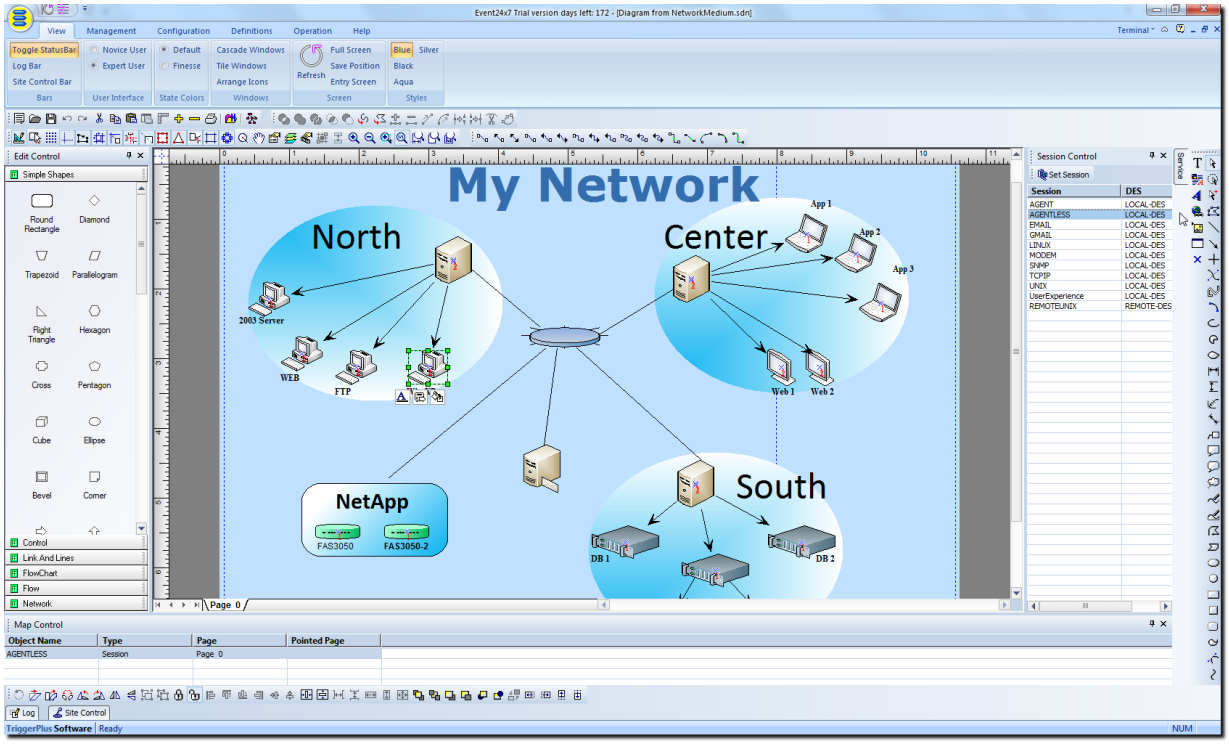
You have to link a shape with a Session or Services defined for Event24x7.

When linking is done, Event24x7 will automatically update the shape at runtime with the computer current status.

7.1.2.1 Link shape to a Session

Select a shape that you want to link to a session.

At the right windows side there is **Session bar**. Put the mouse over it and a sessions list window will be opened.



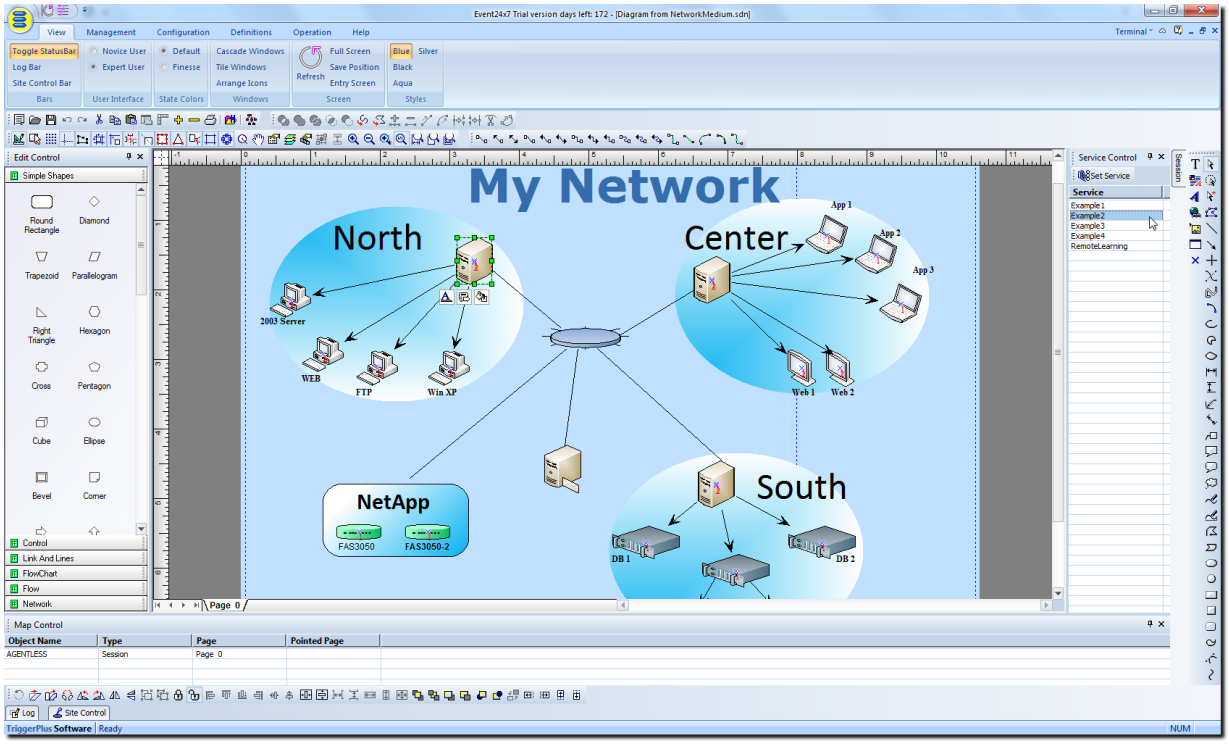
Select the desired session and press the Set Session button.

Event24x7 will assign the selected session into the selected shape.
The result can be seen at the Map Control bar at the bottom.

7.1.2.2 Link shape to a Service

Select a shape that you want to link to a service.

At the right windows side there is **Service bar**. Put the mouse over it and a services list window will be opened.



Select the desire service and press the Set Service button.

Event24x7 will assign the selected service into the selected shape.
The result can be seen at the Map Control bar at the bottom.

7.1.2.3 Use of the Map Control

The map Control displays the defined sessions and services.

Select an entry and press the right mouse button. A popup will be opened:

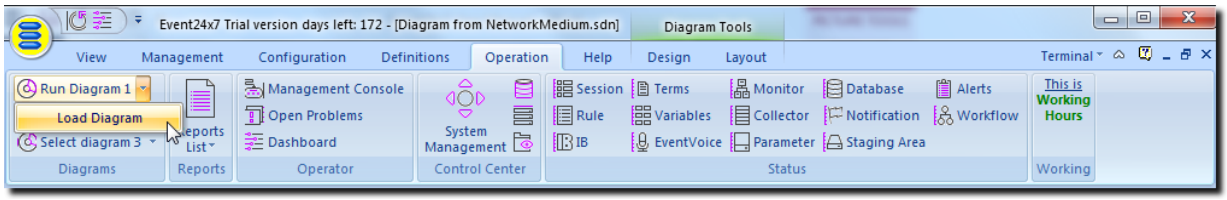
Reset Entry	Resets the pointed shape. Removes the link from the pointed shape to the defined session or service.
Set Pointed Service Page	. Provides the method to link a service to a specific page. Mouse left button double click on a shape performs the following at run-time: • Session shape, displays the 20 severe parameters. • Service shape, displays the page that is defined for the service. This option lets you define the page that will be displayed when the double click event occurs on the shape.

7.2 Diagram Runtime

At the Diagram Runtime mode Event24x7 uses a defined diagram to reflect the session situation and statuses.

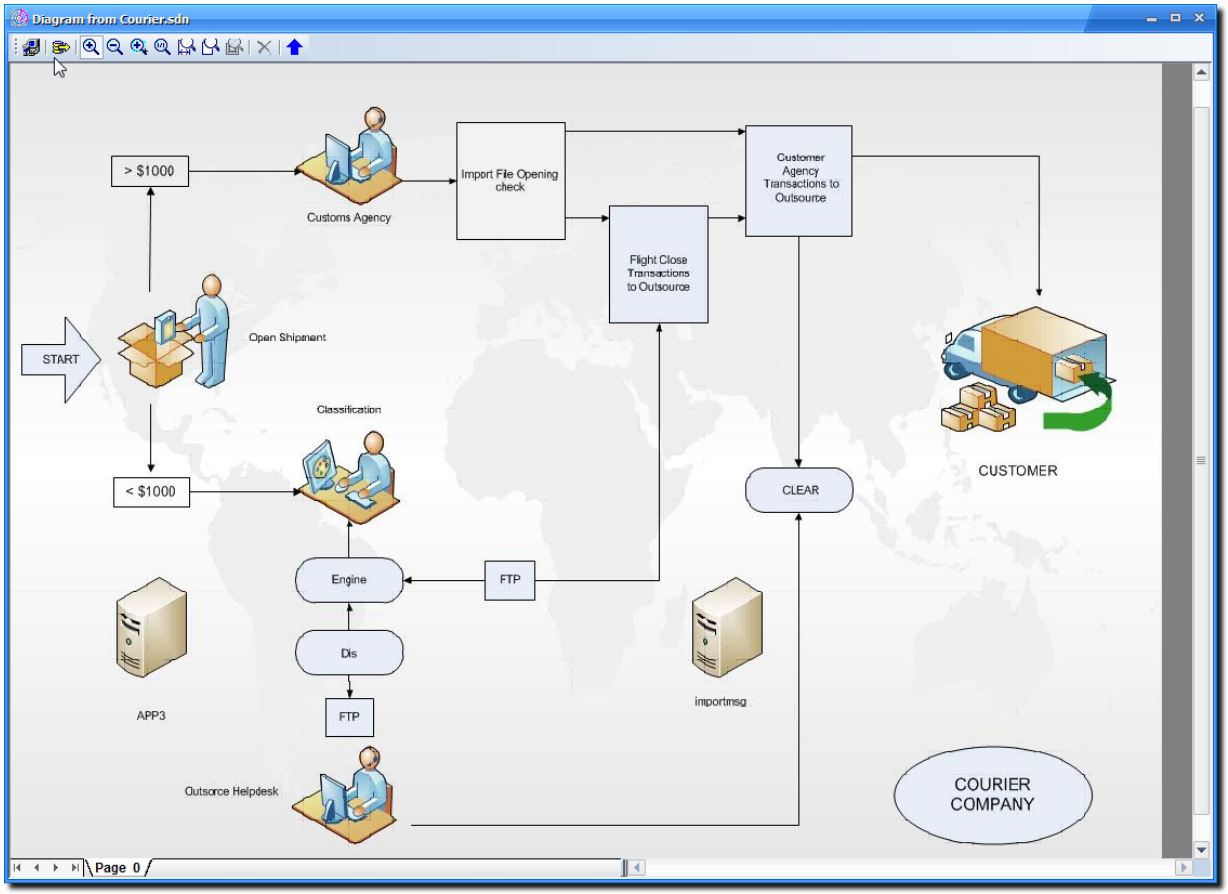
7.2.1 Selecting a Runtime Diagram

At the Operation Menu there are three “Run Diagram” entries. At the right side of each one of them there is an arrow. Selecting the arrow, a popup menu will be opened:



It gives you the opportunity to assign a defined diagram with the entry.
Once assigned, pressing the Run Diagram button the diagram will be opened in runtime mode.

7.2.2 Using Runtime Diagram



7.2.2.1 Display Shape

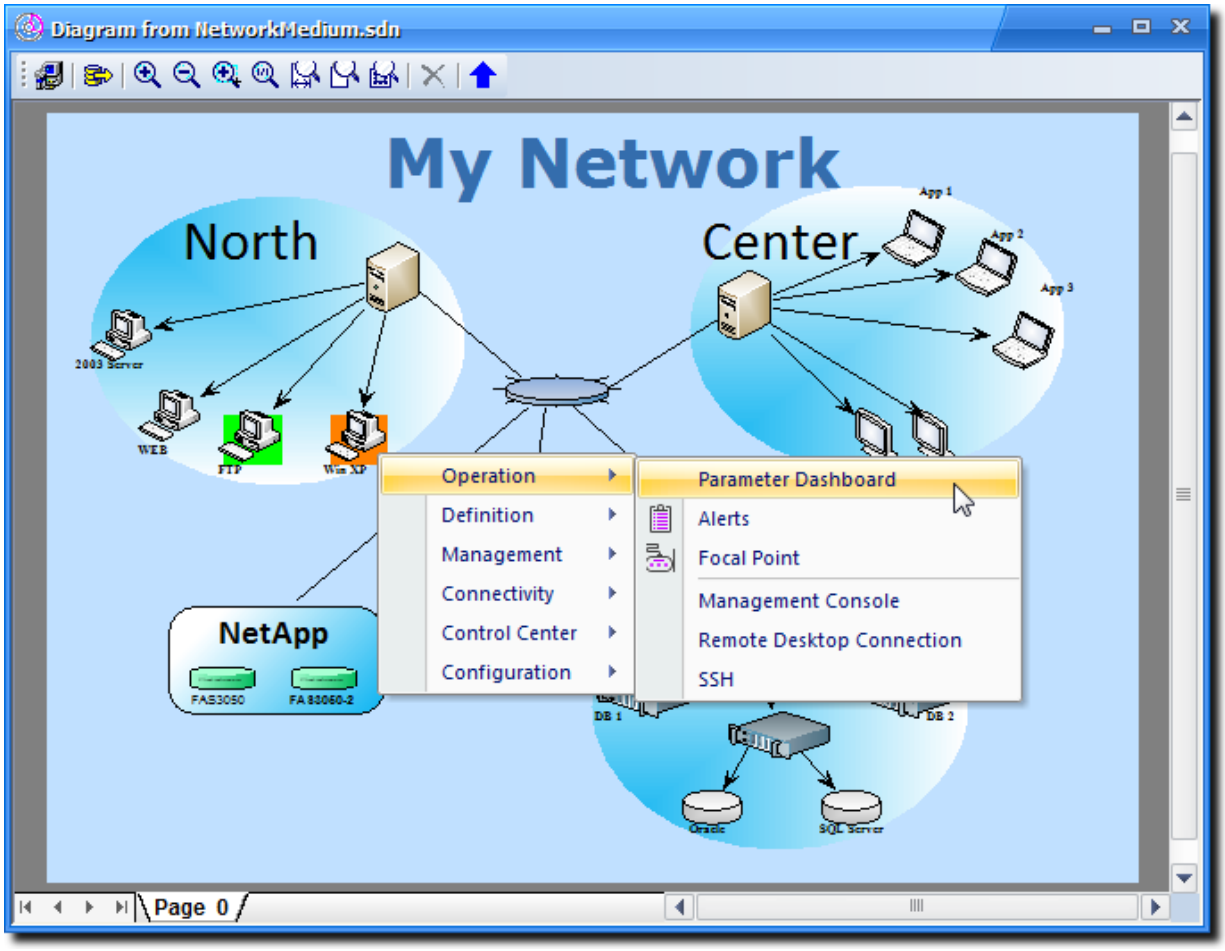
Event24x7 paints the shape that is linked to a session with the suitable color. The color reflects the highest severity for the session's parameters. When the session state is changed, Event24x7 will change the color automatically.

7.2.2.2 Quick Summary

Placing the mouse over a shape that represents a session will produce a quick summary for the session. It displays in table format the number of existing errors in each state.

7.2.2.3 Drill Down

Putting the mouse over a shape that is connected to a session and clicking the right button will open a popup menu that lets you investigate all the components of event24x7.

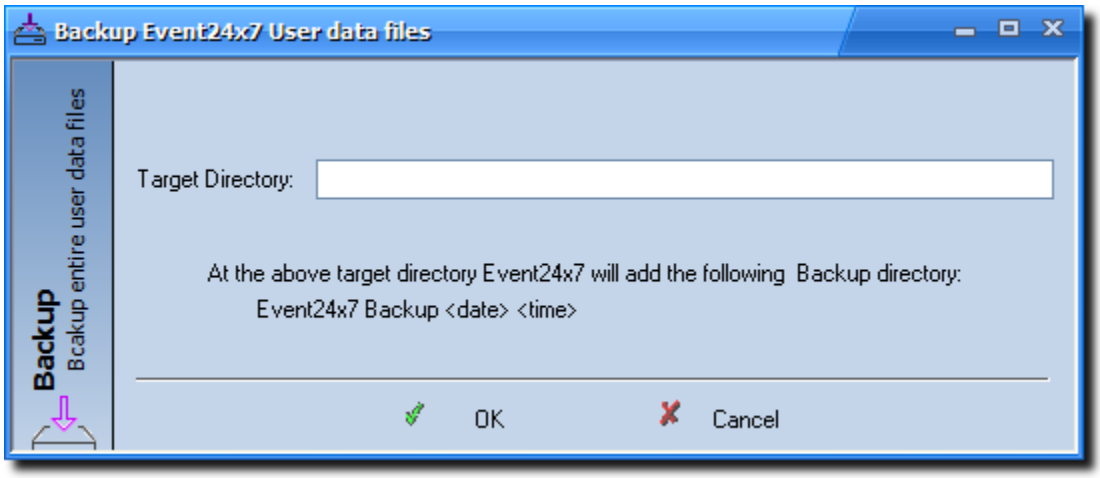


8. Management

The Management part contains useful utilities that help and assist you with special activities.

8.1 Backup

Let Event24x7 take automatic backup of the user definition data.



If Target Directory was not set, the Backup will be written to the default directory:

<CES Installation Path>\Runtime\Backup"

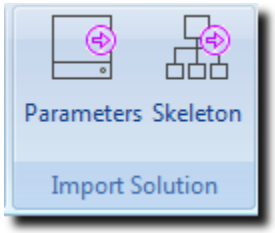
For each backup process, Event24x7 sets the filename:

Event24x7 Backup YYYY-MM-DD HHMMSS

The following directories are copied with the backup process:
Config, Distributions, Information Base, Mibs.
Profiles, Rules, Scripts, Sessions, Users, Voice and
PerformanceActive.

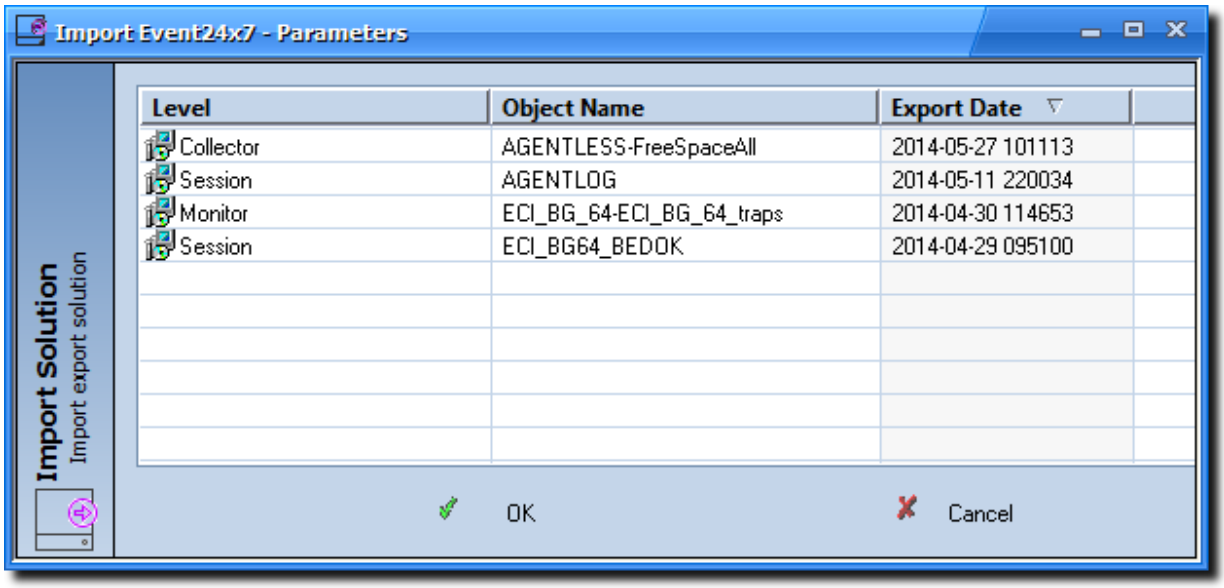
8.2 Import

The Import action is providing a way to copy solutions and skeletons from on Event24x7 installation to another.
Place you exported file (solution or skeleton) in the relevant directory (Imports for solutions or ImportsSkeleton for skeletons) and click on the desired action.



8.2.1 Import Parameters

Enable copying a solution from one Event24x7 installation to another.



The Import solution has two steps:

- Perform Export to solution.
  You can perform Export from two different locations:
  1. Session configuration. In this case, the Export will include all the monitoring definitions defined for the session.
  2. From monitoring definition. In this case, you can select the level of Export: Monitor, Collector or Parameter.

- Perform Import Parameters to add the new solution to the current Event24x7 installation.

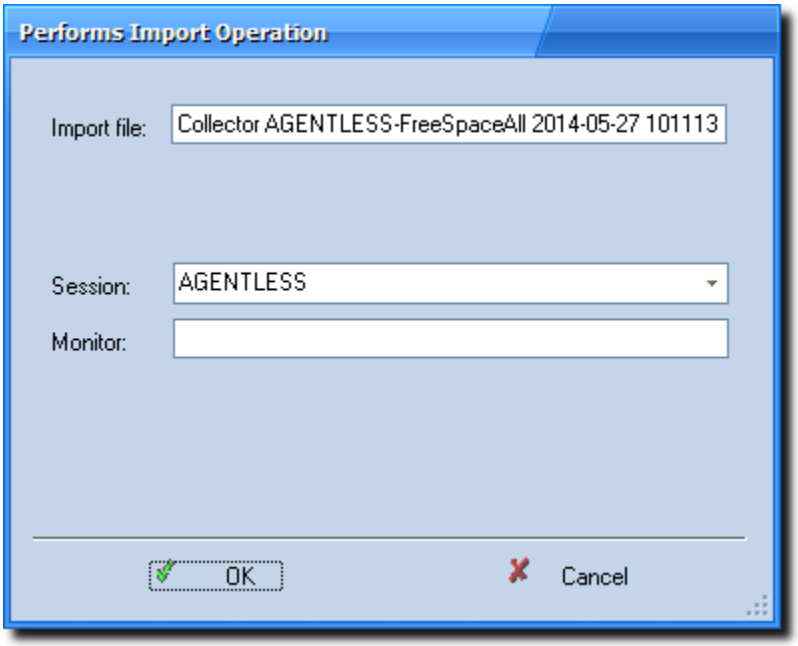
The Export and the Import are done from the specific folder:
<CES installation directory>\Imports

The Export process creates a ZIP file containing all the information necessary for the Import process to succeed.
The Import process lets you change the name of the object involved. For example, if you take an Export from the Neptune session, then during the Import process you can change the session's name.

Starting the Import process is done by selecting a requested Exported entry and clicking the right mouse button or using double clicks with the left mouse button.

8.2.1.1 Performing an Import Operation

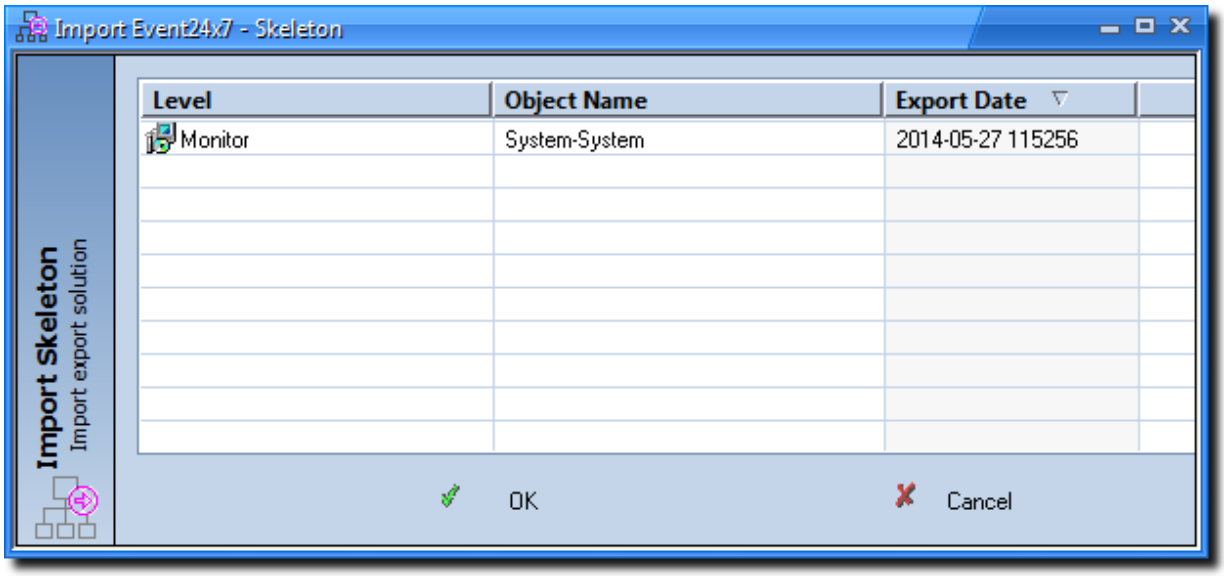
When starting the Import operation the following window appears:



The Import Operation lets you change the name if the Event24x7 object is involved.

8.2.2 Import Skeleton

Enable copying a skeleton from one Event24x7 installation to another.



The Import skeleton has two steps:

- Perform Export to skeleton.
  You can perform Export from two different locations:
  1. Skeleton Names Definition. In this case, the Export will include all the monitoring definitions defined for the skeleton.
  2. From Skeleton Definition. In this case, you can select the level of Export: Monitor, Collector or Parameter.

- Perform Import Skeleton to add the new skeleton to the current Event24x7 installation.

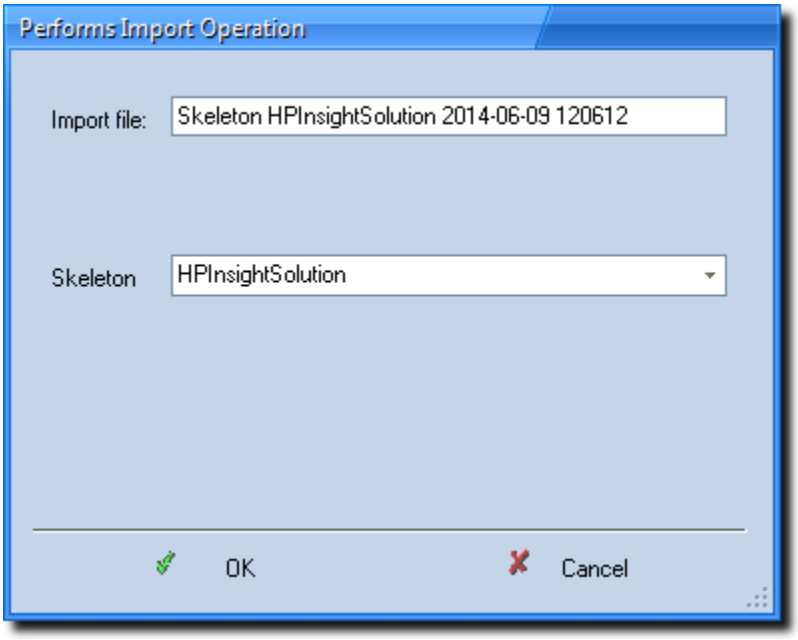
The Export and the Import are done from the specific folder:
<CES installation directory>\ImportsSkeleton

The Export process creates a ZIP file containing all the information necessary for the Import process to succeed.

Starting the Import process is done by selecting a requested Exported entry and clicking the right mouse button or using double clicks with the left mouse button.

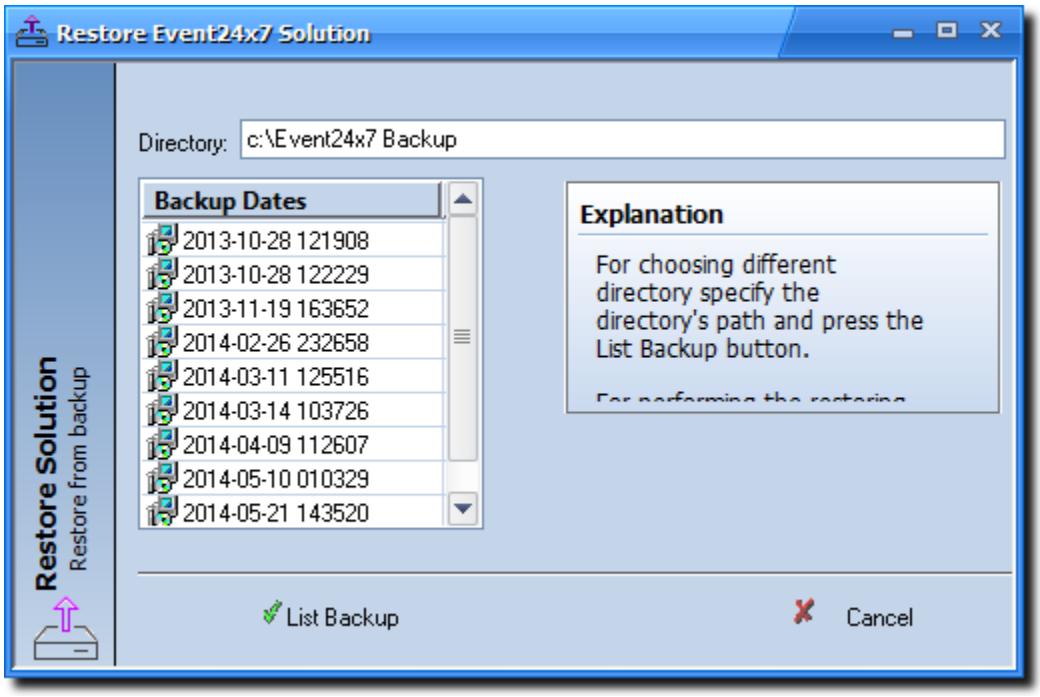
8.2.2.1 Performing an Import Operation

When starting the Import Skeleton operation the following window appears:



8.3 Restore From Backup

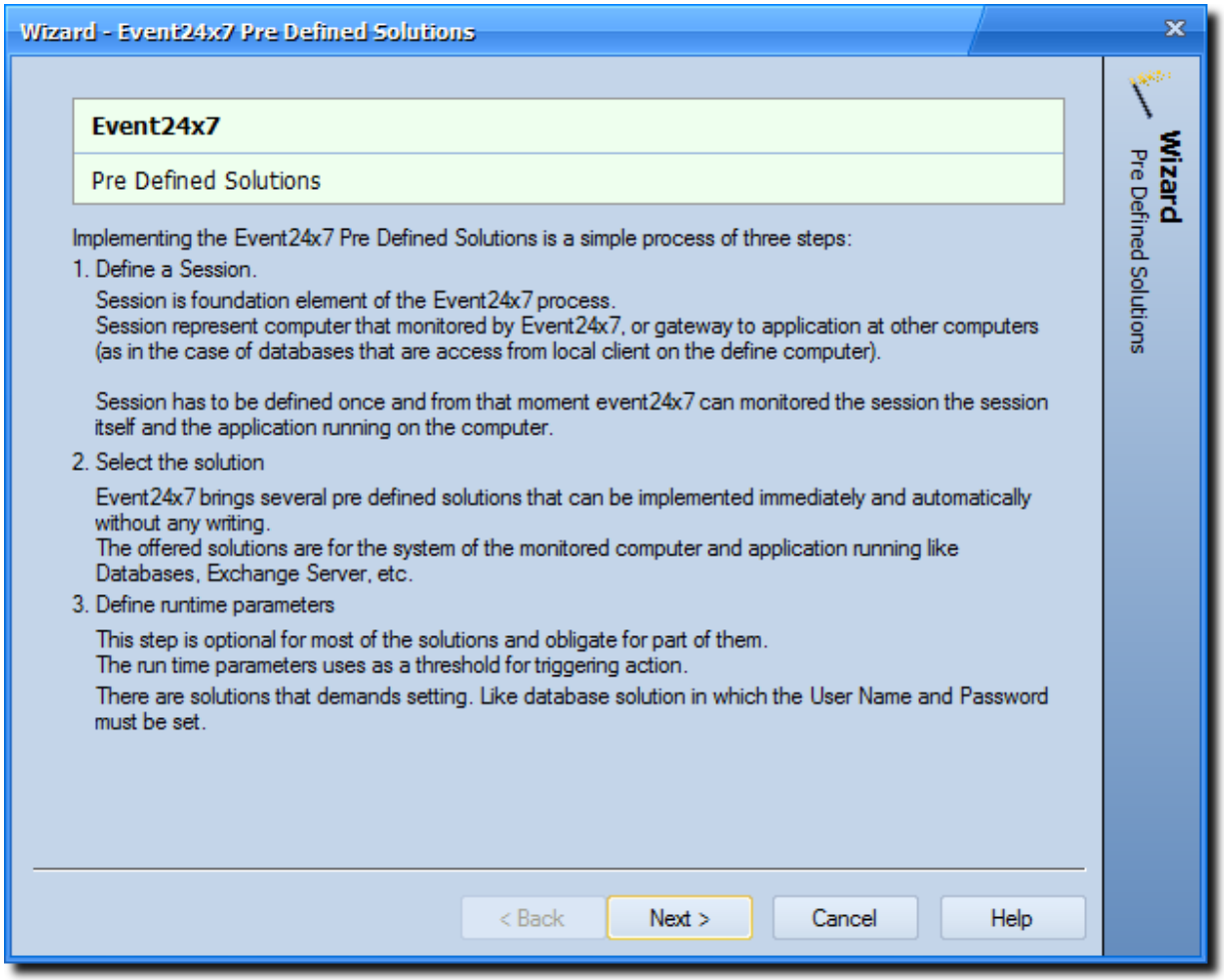
Restore all the Event24x7 configuration files that have been previously backed up. The List Backup button seen below allows you to select the backup date from which you want to restore the files. **Note**: this whole screen becomes irrelevant if you haven't backed up your monitoring system at least once so remember to **Take a backup** before commiting a Restore.



8.4 Installing Pre Defined Solutions

Event24x7 provides pre defined solutions for various systems and applications. The Wizard guides you all the way to add a new monitored computer or add new solutions without any errors possible.

Wizard's first screen:


Wizard - Event24x7 Pre Defined Solutions
Event24x7
Pre Defined Solutions
Implementing the Event24x7 Pre Defined Solutions is a simple process of three steps:
1. Define a Session.
Session is foundation element of the Event24x7 process.
Session represent computer that monitored by Event24x7, or gateway to application at other computers (as in the case of databases that are access from local client on the define computer).
Session has to be defined once and from that moment event24x7 can monitored the session the session itself and the application running on the computer.
2. Select the solution
Event24x7 brings several pre defined solutions that can be implemented immediately and automatically without any writing.
The offered solutions are for the system of the monitored computer and application running like Databases, Exchange Server, etc.
3. Define runtime parameters
This step is optional for most of the solutions and obligate for part of them.
The run time parameters uses as a threshold for triggering action.
There are solutions that demands setting. Like database solution in which the User Name and Password must be set.
Wizard
Pre Defined Solutions
< Back
Next >
Cancel
Help

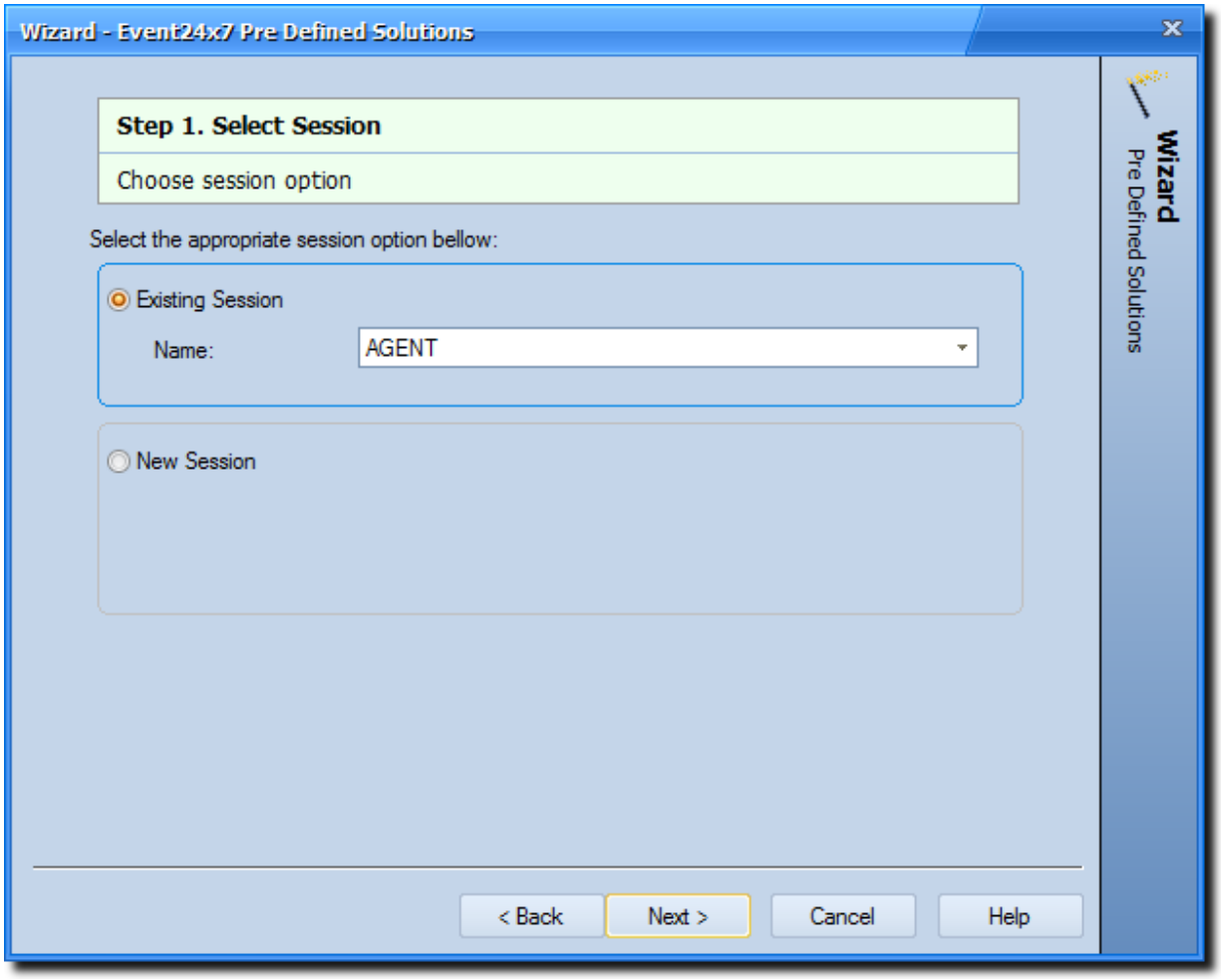
Installing the pre Defined Solutions is a simple three steps process as explained in the screen.

8.4.1 Wizard step 1 – Select Session

You have two session options:

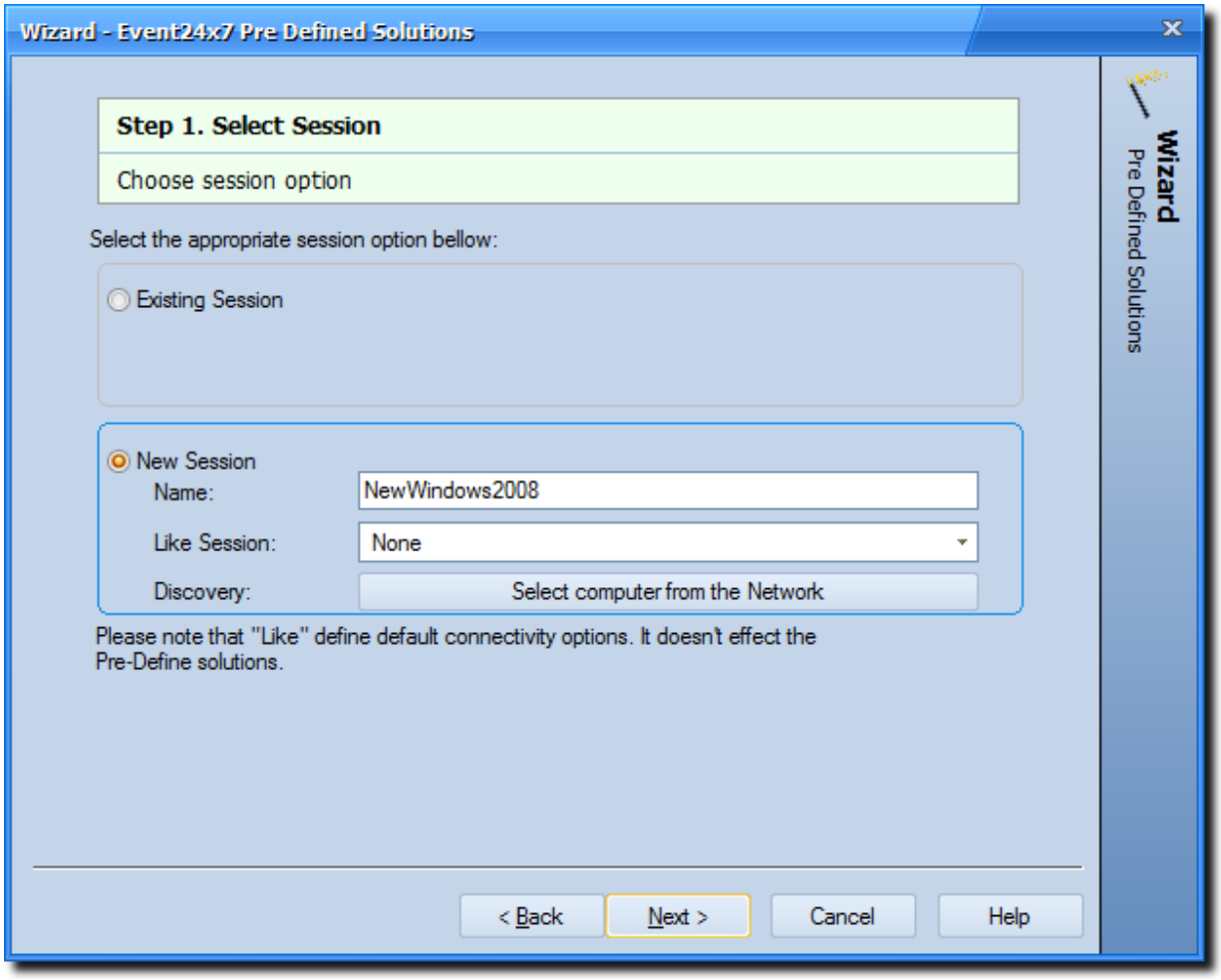
- Select an existing session
  When referring to an existing session, the wizard will direct you to the second step.
- Selecting a new session.
  The Wizard will direct you to specify only the parameters necessary for defining the new session. If you add also a new DES, it will add the new DES for you.

8.4.1.1 Existing Session



Press the Next button to move to the second step - Wizard step 2 – Select Solution

8.4.1.2 New Session



In this case you have to specify the new session name.
The **Like Session** parameter gives the new session the connectivity attributes of the specified session.

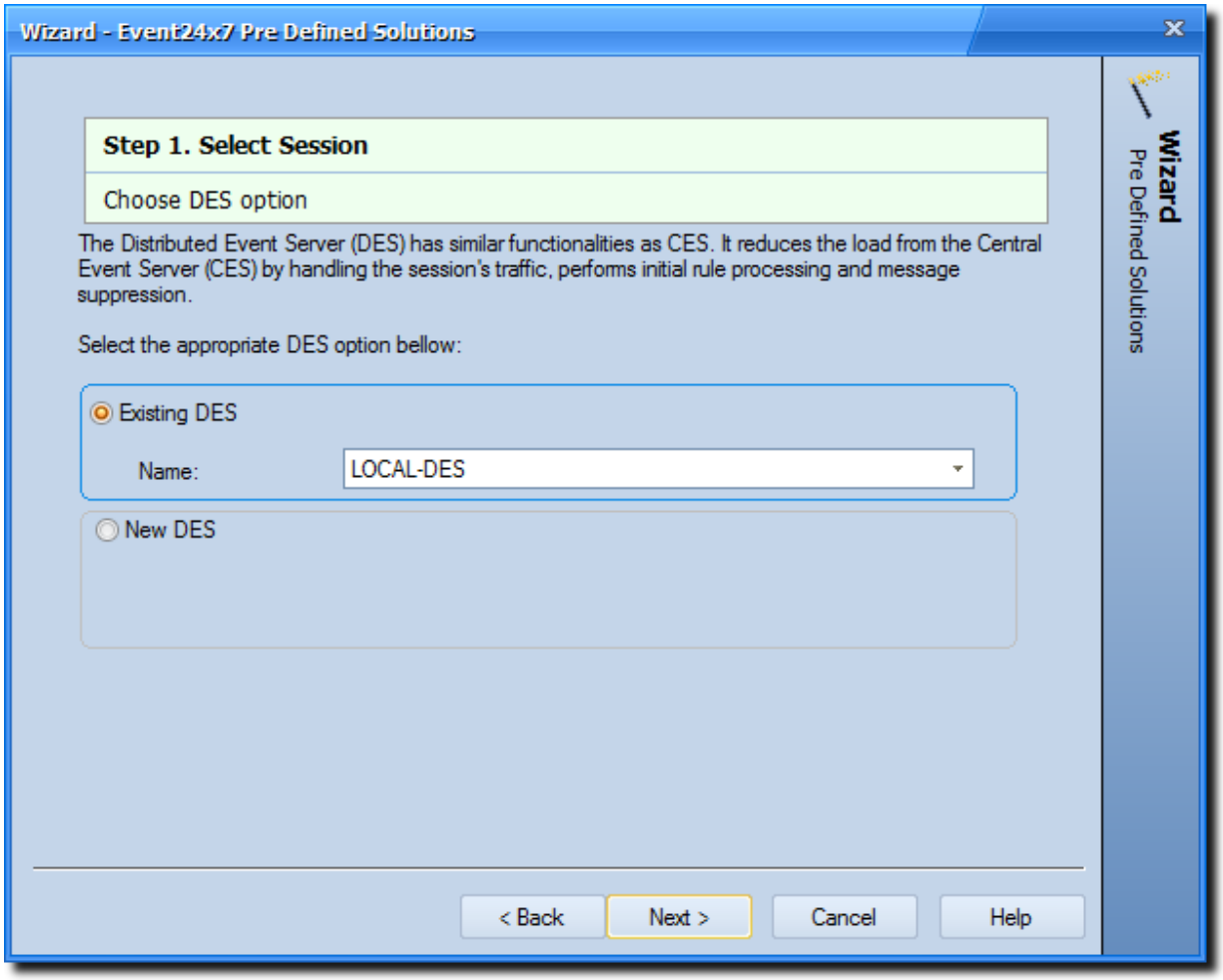
You can use the “Select computer from the Network” option.
Press the “Next Button” and you will stay in the 1st step but with the following screen:

8.4.1.2.1 Select DES type

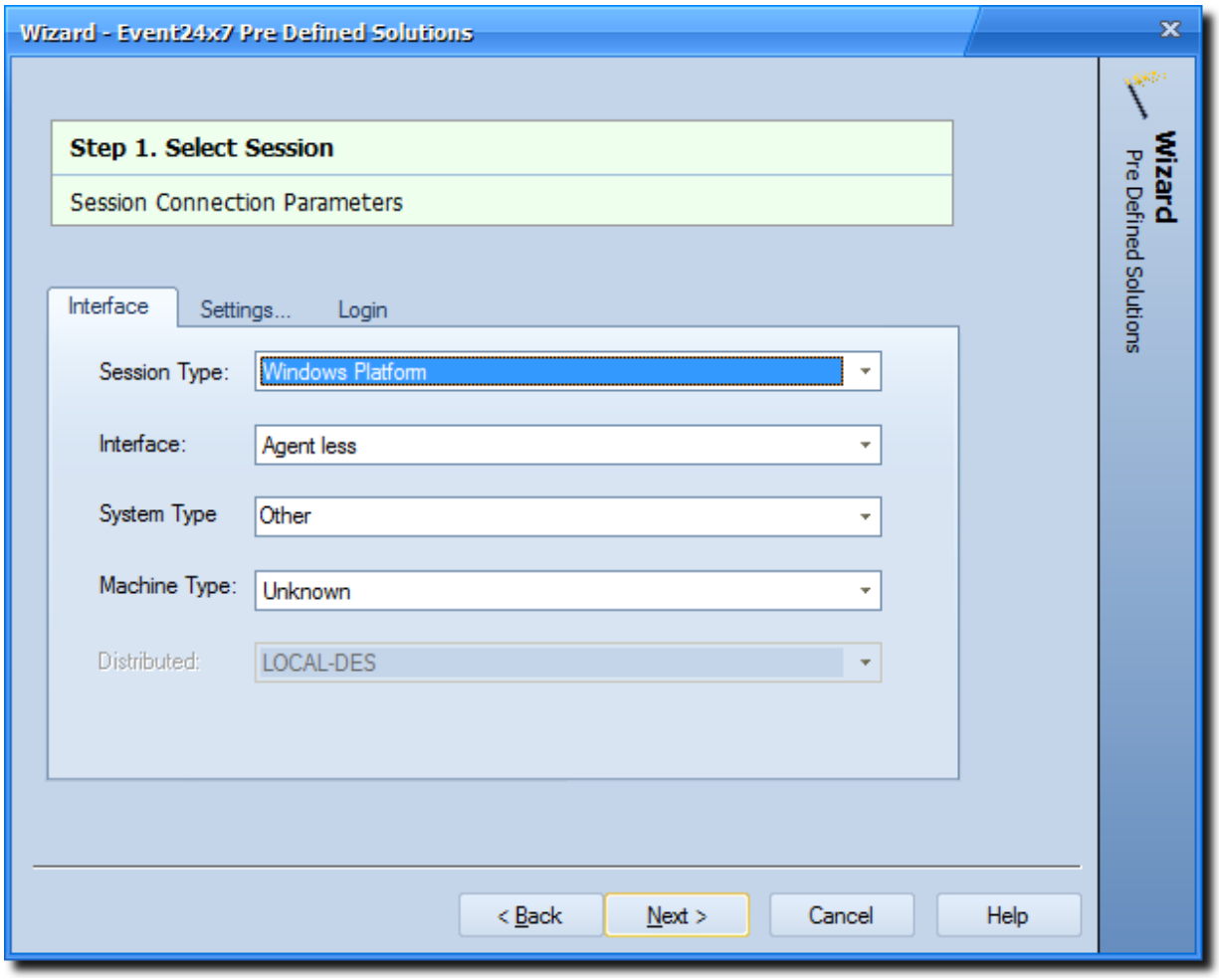
You have two options:

- Select an existing DES type.
  If you select an existing one you must select from the combo-box the DES type you prefer: either LOCAL-DES or REMOTE-DES.
- Creating a new DES type.

8.4.1.2.1.1 Existing DES type

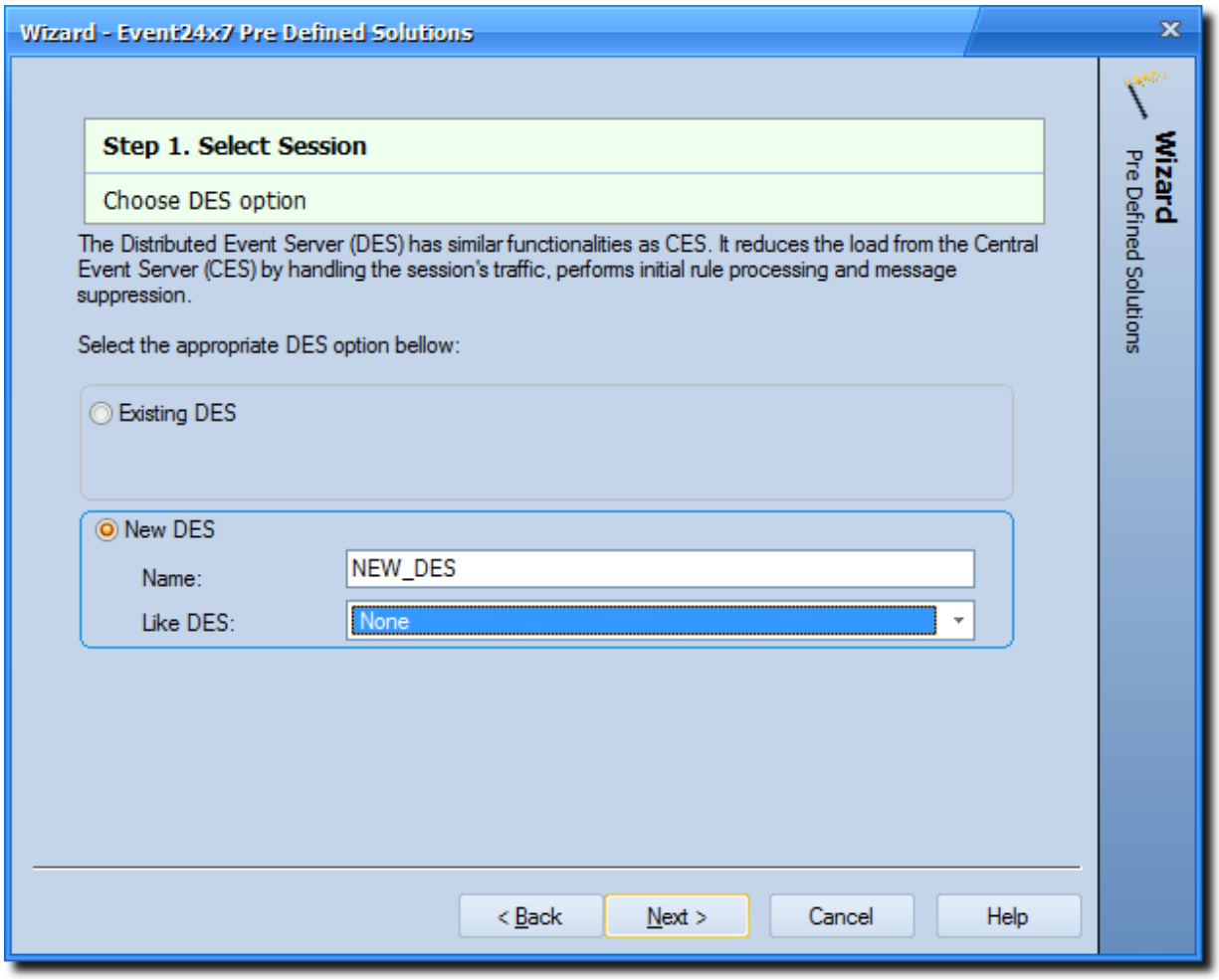

Wizard - Event24x7 Pre Defined Solutions
Step 1. Select Session
Choose DES option
The Distributed Event Server (DES) has similar functionalities as CES. It reduces the load from the Central Event Server (CES) by handling the session's traffic, performs initial rule processing and message suppression.
Select the appropriate DES option bellow:
Existing DES
Name:
LOCAL-DES
New DES
< Back
Next >
Cancel
Help
Wizard
Pre Defined Solutions

Press Next to continue.

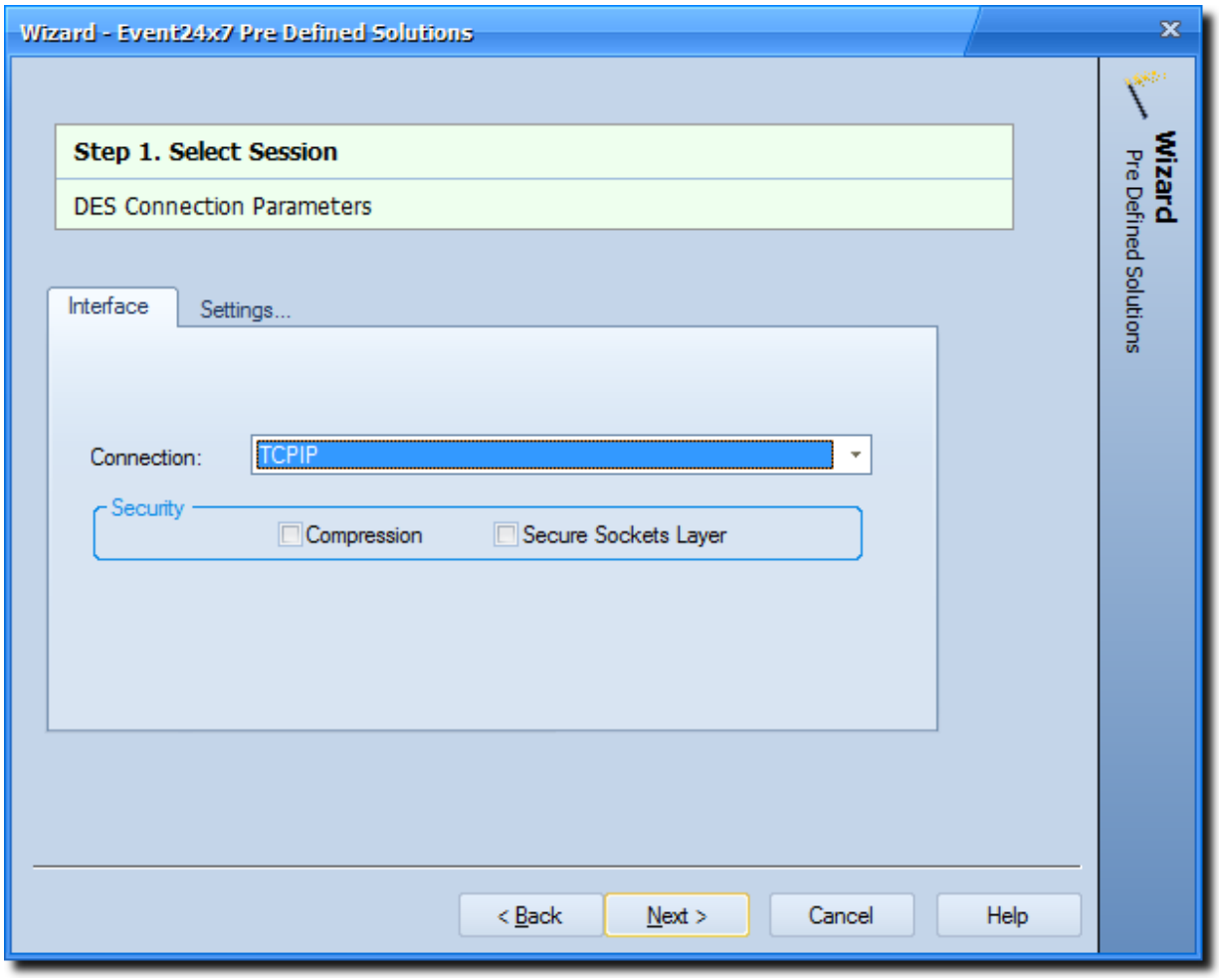


Select the session connection parameters for the new DES and session you added. Now you can skip to Wizard step 2 – Select Solution.

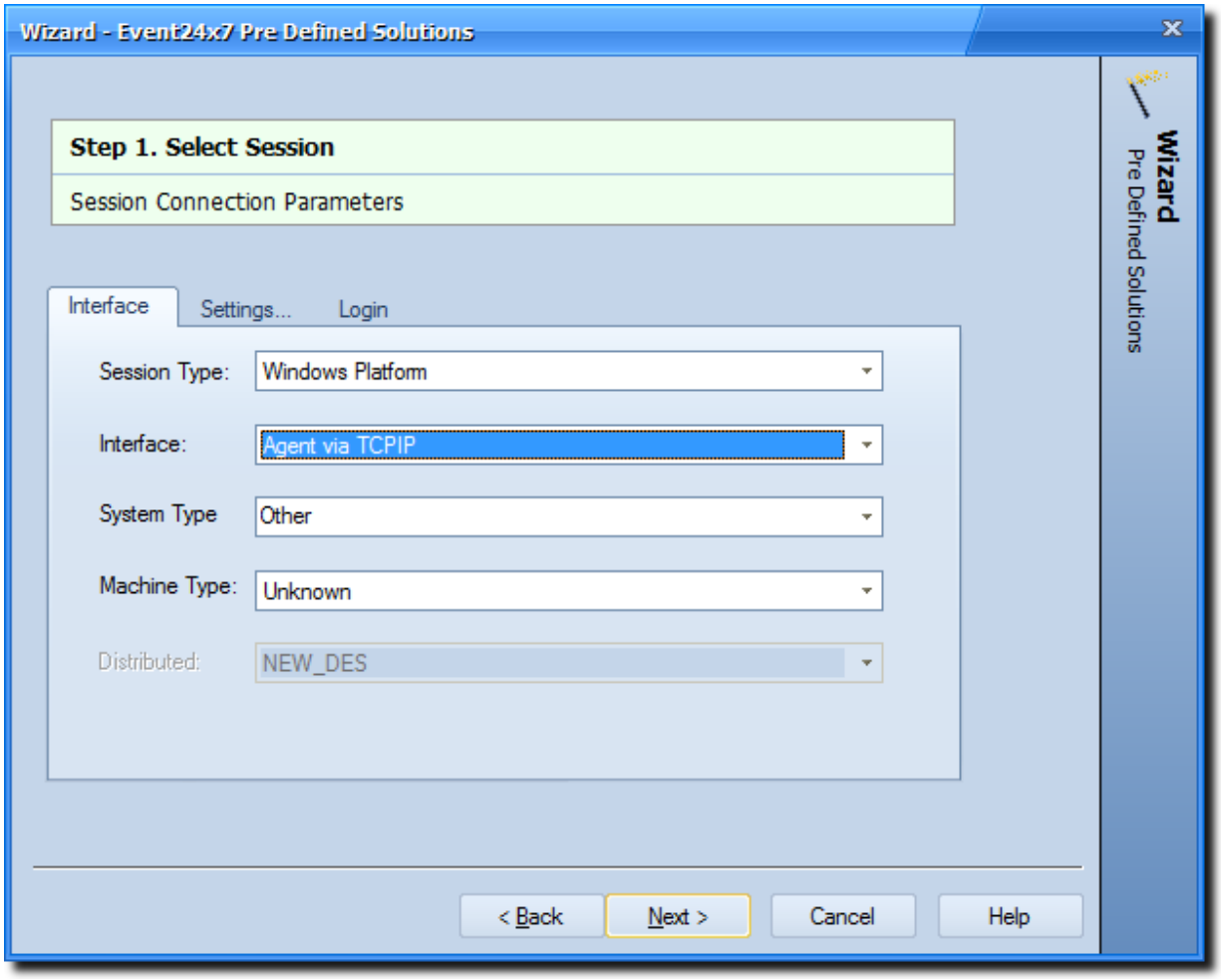
8.4.1.2.1.2 New DES type


Wizard - Event24x7 Pre Defined Solutions
Step 1. Select Session
Choose DES option
The Distributed Event Server (DES) has similar functionalities as CES. It reduces the load from the Central Event Server (CES) by handling the session's traffic, performs initial rule processing and message suppression.
Select the appropriate DES option bellow:
Existing DES
New DES
Name:
NEW_DES
Like DES:
None
< Back
Next >
Cancel
Help
Wizard
Pre Defined Solutions

On this screen you must enter the name of the new DES type you would like to create and you can create it like one of the existing DES types or as a totally new type. Now press Next to continue.

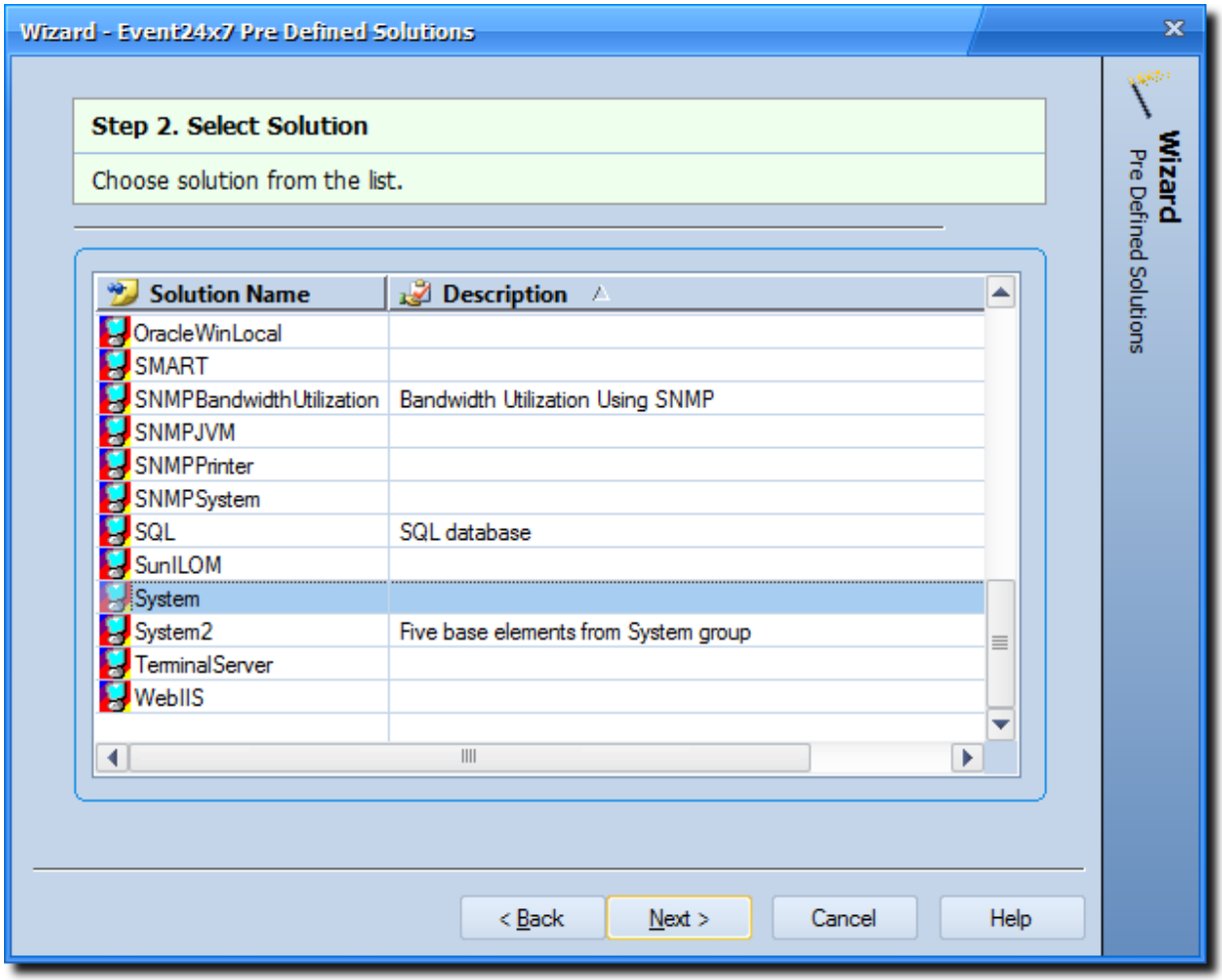


On this screen you can select either TCPIP or PIPE for the DES connection parameters. Make your selection and accordingly fill in the Settings Tab. Press Next to continue.



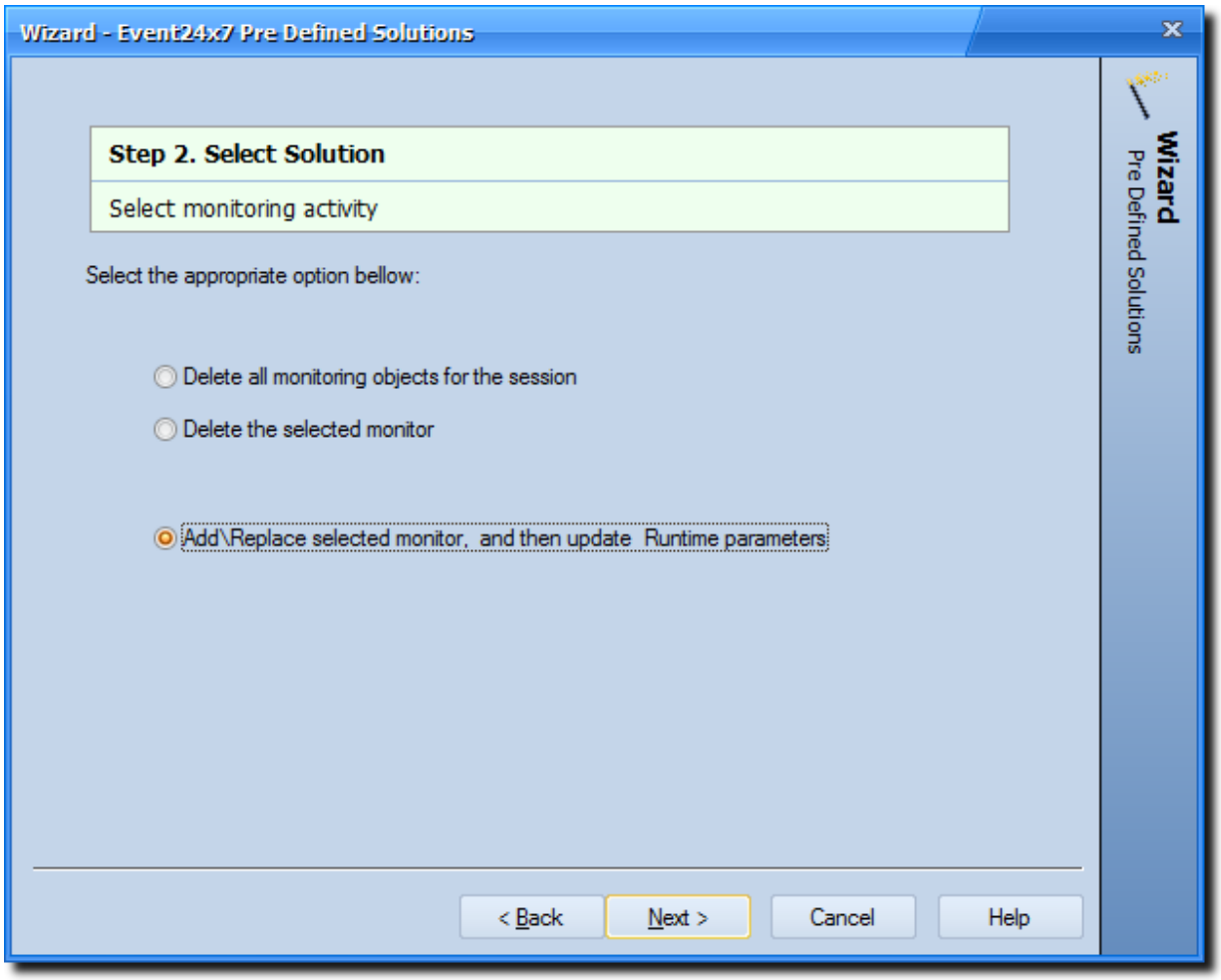
Select the session connection parameters for the new DES Type, DES and session you added. Press Next to continue.

8.4.2 Wizard step 2 – Select Solution



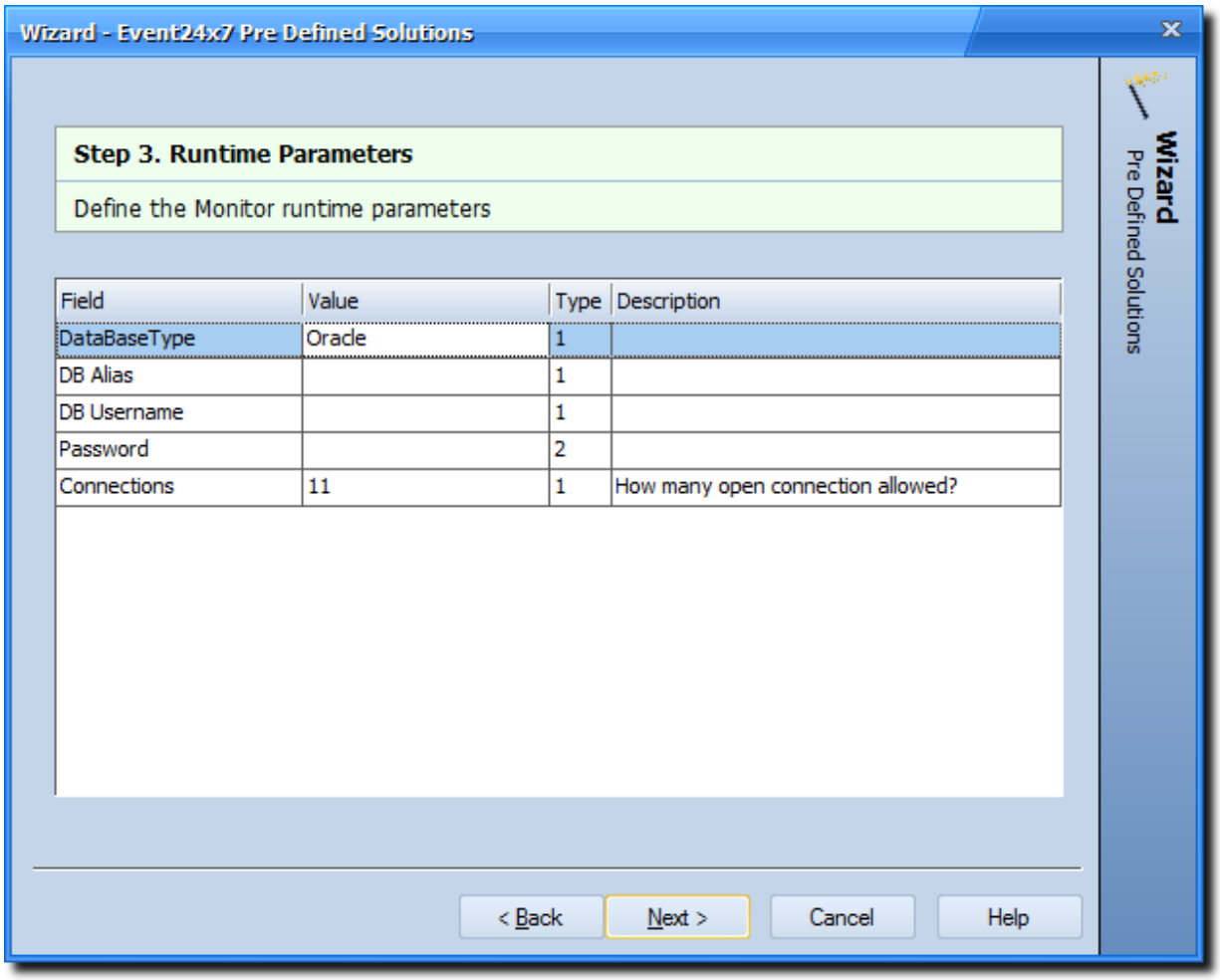
You have to select the solution you want to install.

Press the Next button to continue.



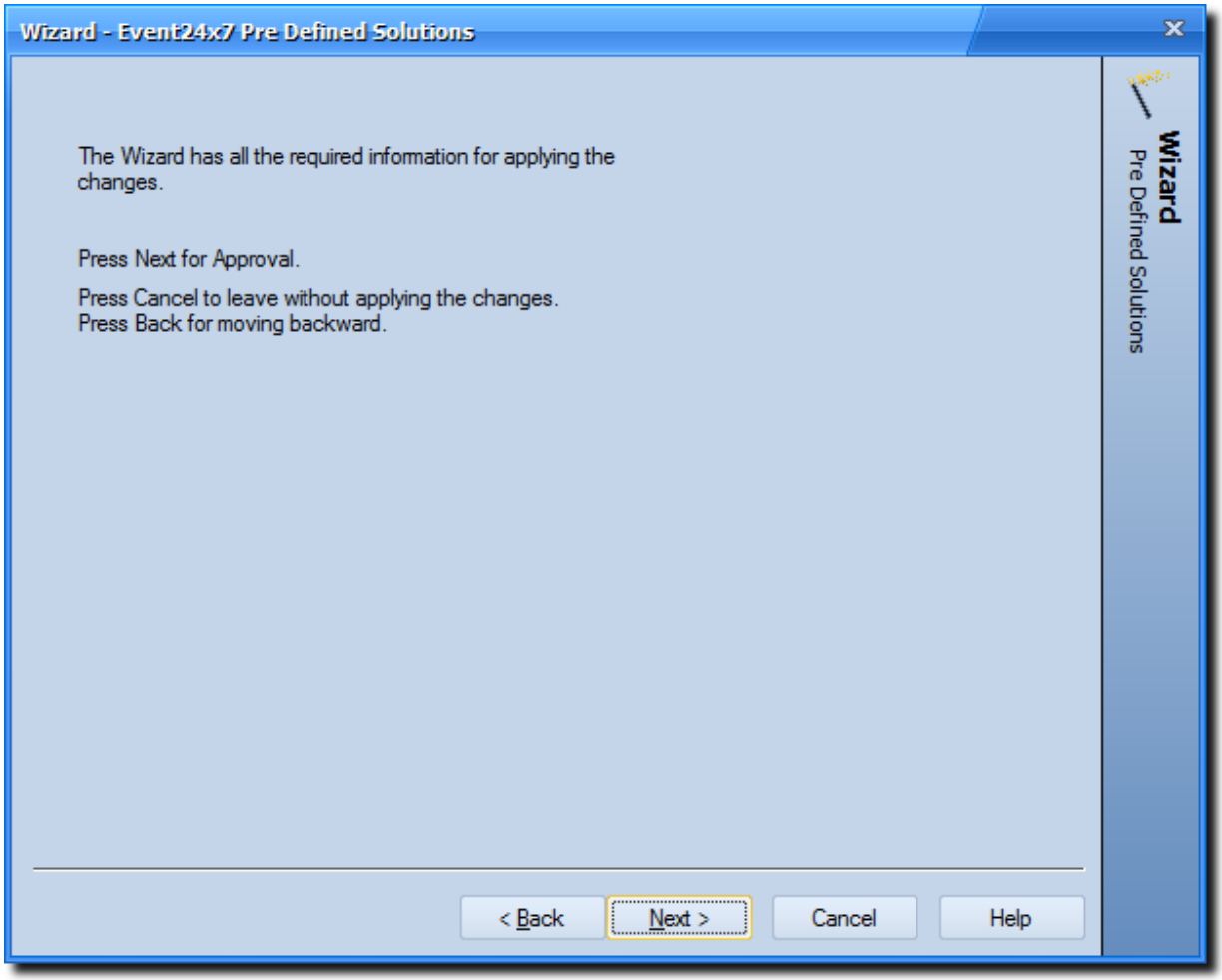
Only if you select the last option as indicated above and then press Next you will move on to step 3 on the next page. Otherwise, you will skip this step and move on directly to the final step which is: Wizard – Approval.

8.4.3 Wizard step 3 – Runtime Parameters



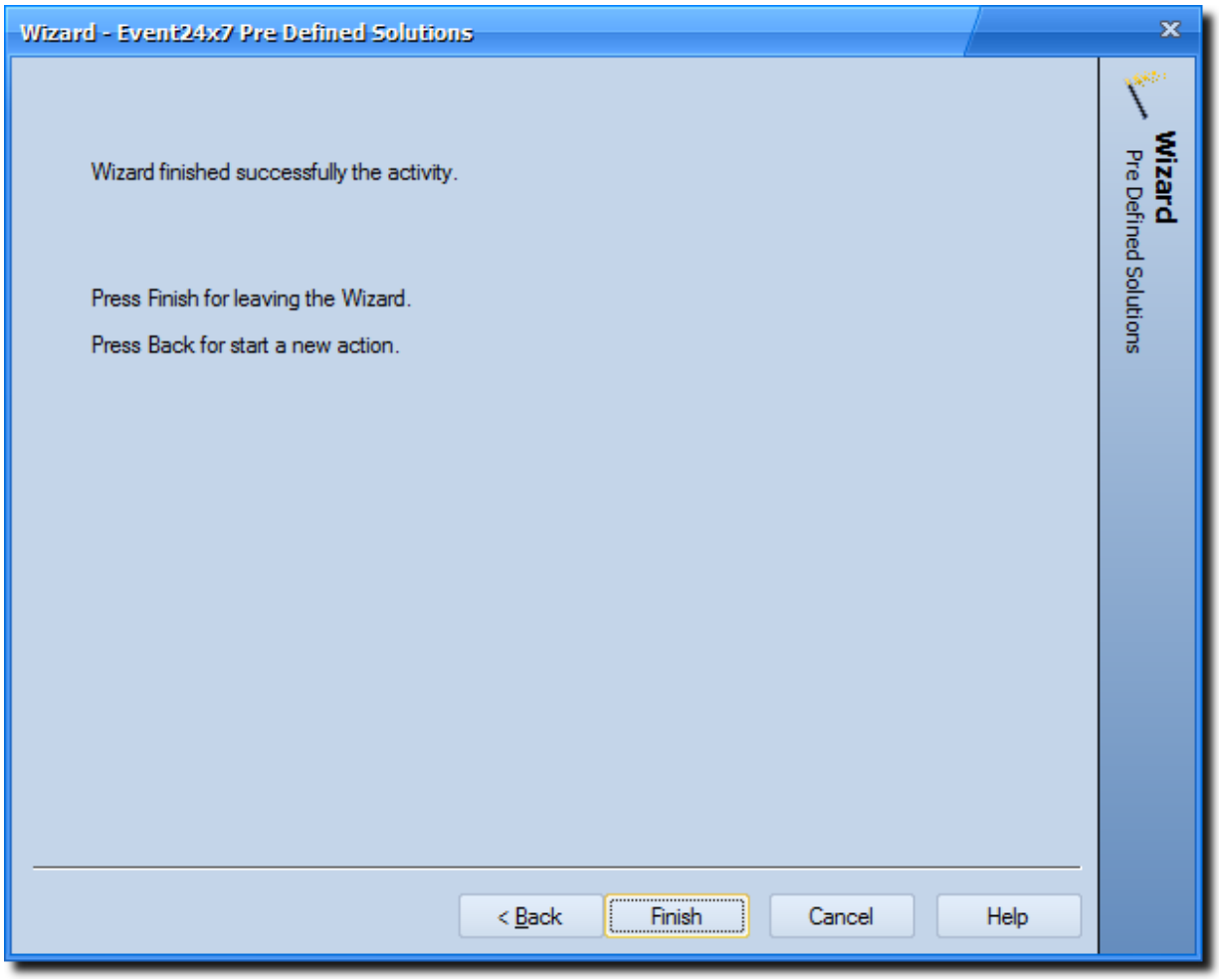
This screen is optional and appears only when the defined solution uses run time parameters. When defining the Oracle solution, for example, you must specify the Oracle's connection parameters. Press Next to continue.

8.4.4 Wizard – Approval


Wizard - Event24x7 Pre Defined Solutions
The Wizard has all the required information for applying the changes.
Press Next for Approval.
Press Cancel to leave without applying the changes.
Press Back for moving backward.
Wizard
Pre Defined Solutions
< Back
Next >
Cancel
Help

The Wizard has all the information to apply the changes.
You have to approve the operation.

Type Next for applying the changes and you will get the final confirmation screen below:



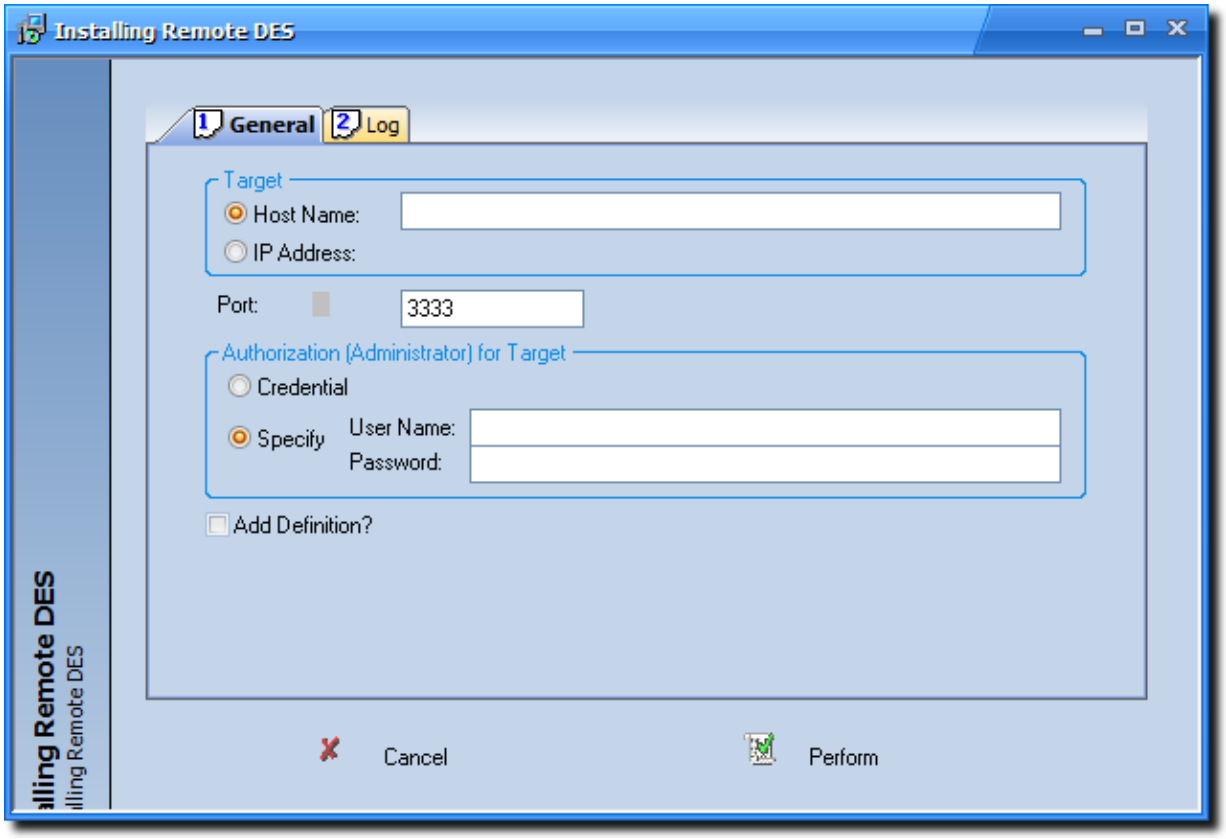
Click Finish to End.

8.5 Deployment Center

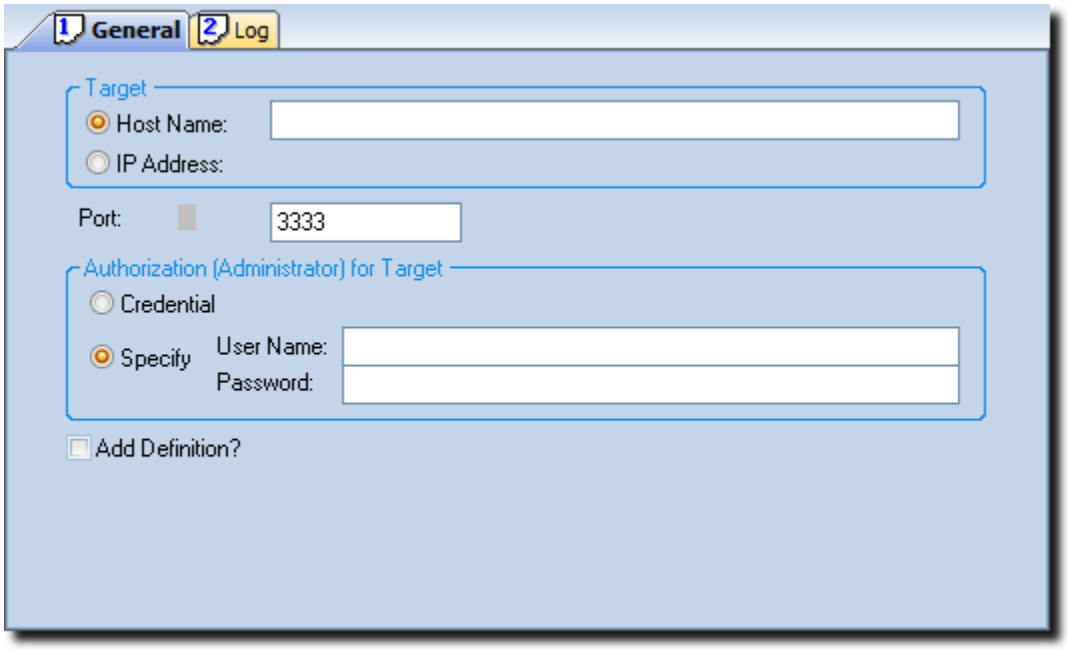
Enable installation of remote DESs, RESs and 3rd party applications as well as performing maintenance for the existing DESs and RESs.

Put the Deployment files at the Deployment folder beneath CES and DES.

8.5.1 Installing remote DES

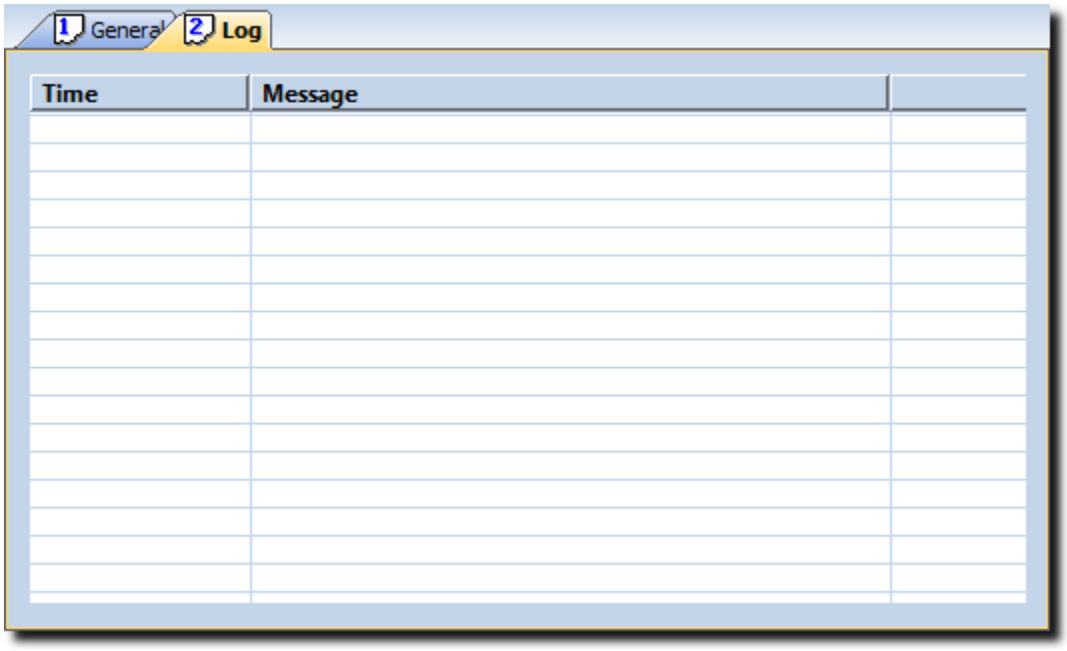


8.5.1.1 General tab



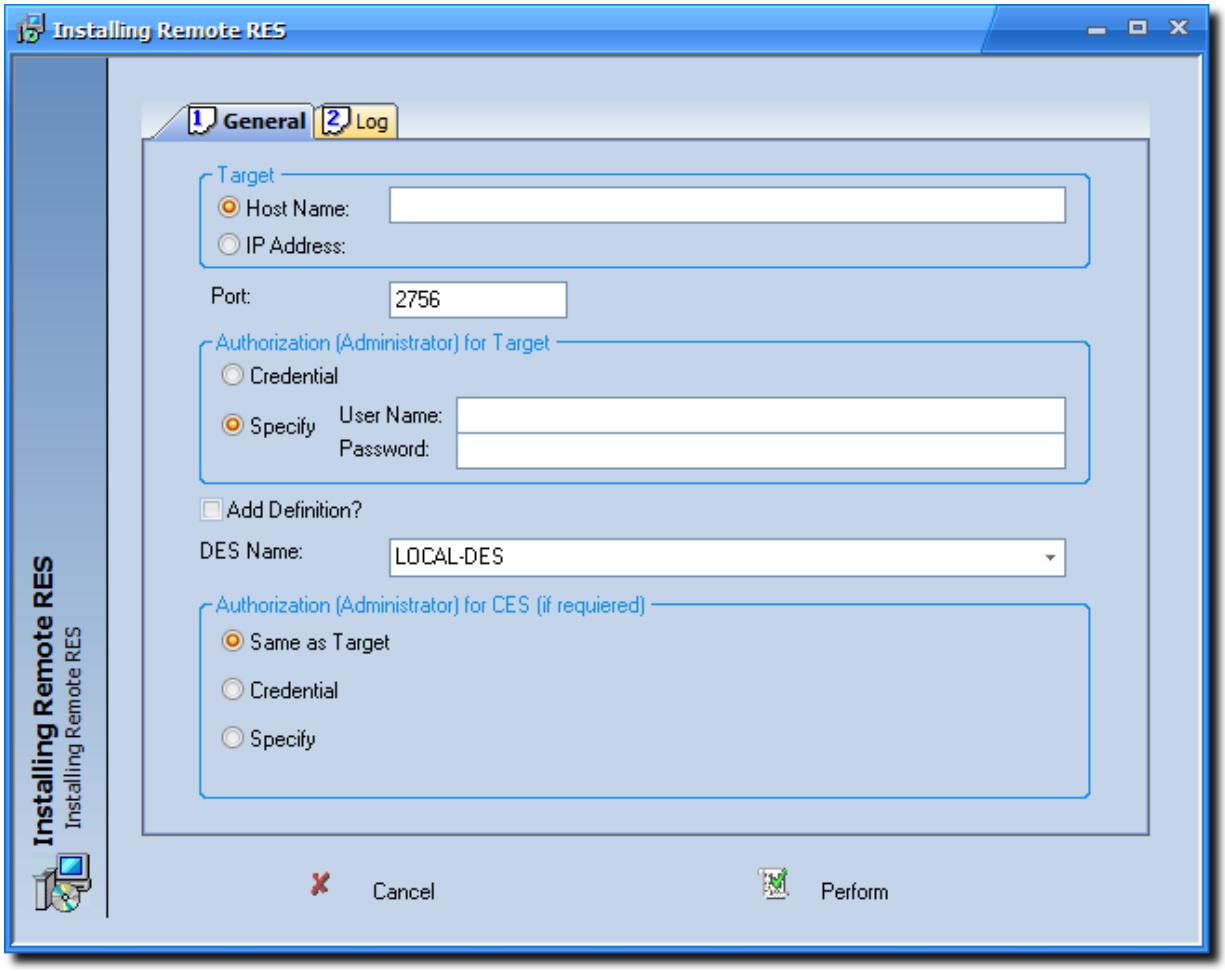
Target	**Host Name**	Remote server host name.
	IP Address	Remote server IP address.
	Port	The port used for communication.
Authorization (Administrator) for Target	**Specify: User name**	User name to be used on remote server.
	Password	Password to be used on remote server.
	Add Definition?	If checked DES definition will be added automatically into Event24x7.

8.5.1.2 Log tab

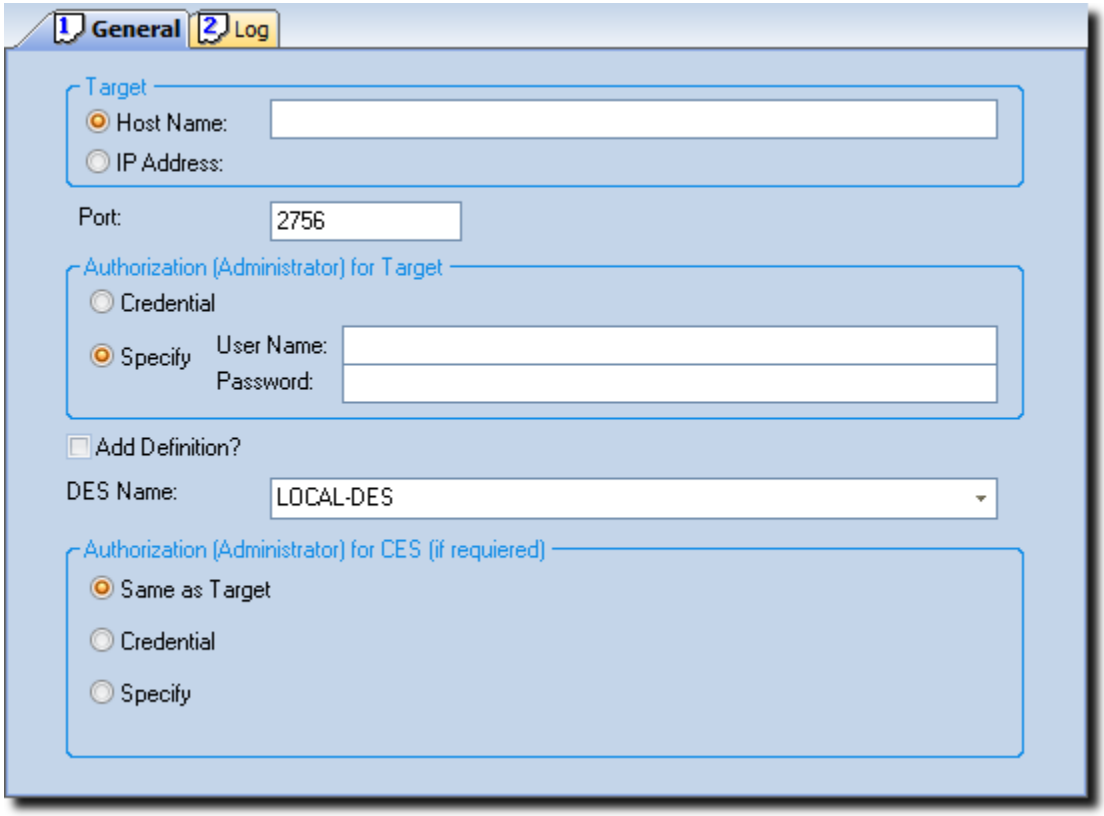


The Log tab provides a list of the actions that the Event24x7 system is taking during the remote installation. It also reports whether the installation was successful or a failure.

8.5.2 Installing remote RES



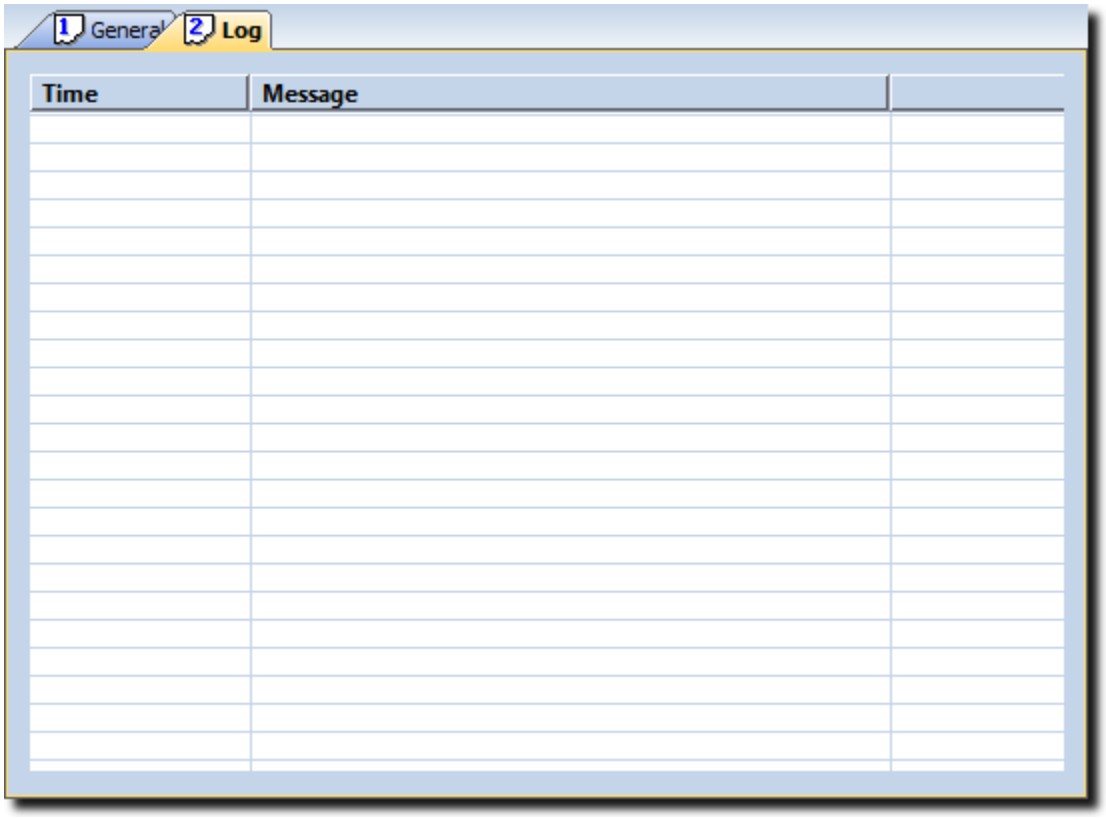
8.5.2.1 General tab



Target	**Host Name**	Remote server host name.
	IP Address	Remote server IP address.
	Port	The port used for communication.
Authorization (Administrator) for Target	**Specify: User name**	User name to be used on remote server.
	Password	Password to be used on remote server.
	Add Definition?	If Checked Session Definition for this RES will added automatically into Event24x7.
	DES Name	The DES under which the RES will be installed
Authorization (Administrator) for CES (if required)	**Same as Target**	Use the same user and password as specified for the target.
	Specify: User name	User name to be used for CES.

Password Password to be used for CES.

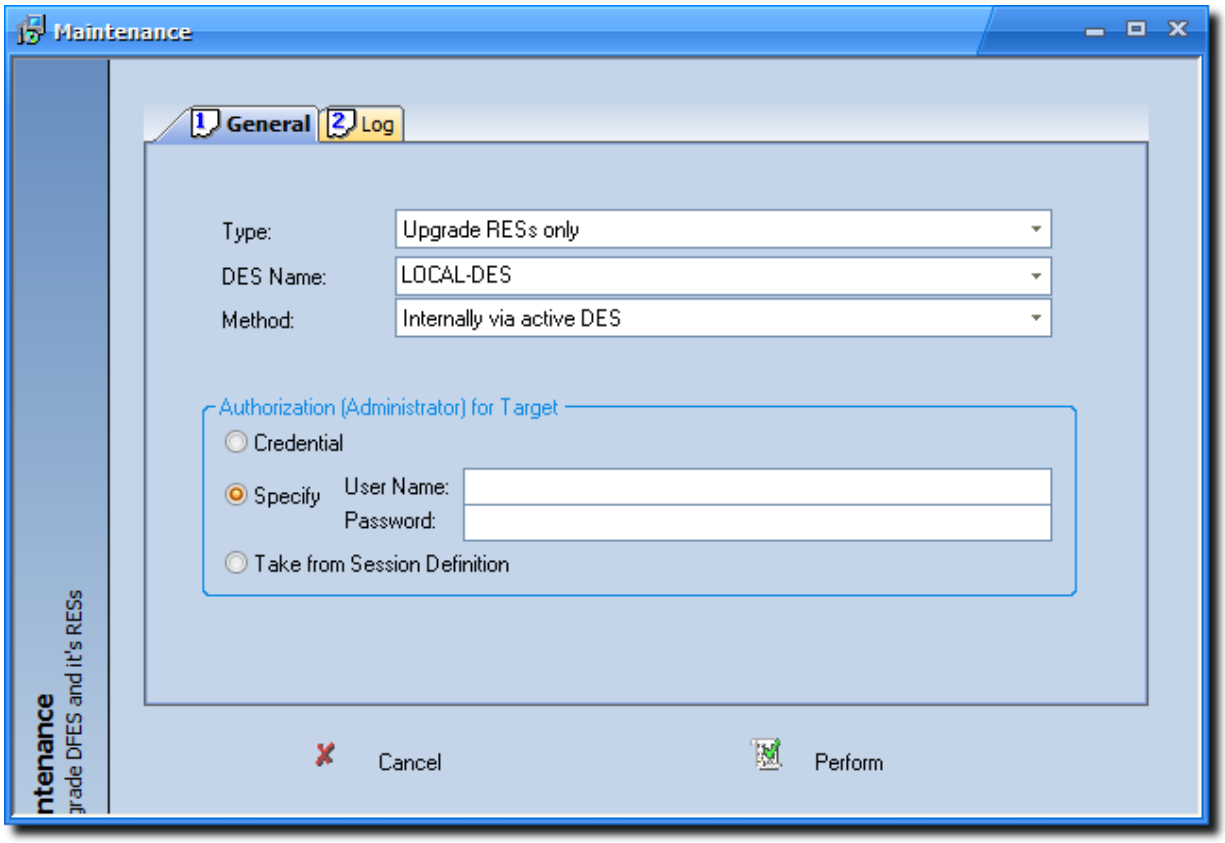
8.5.2.2 Log tab



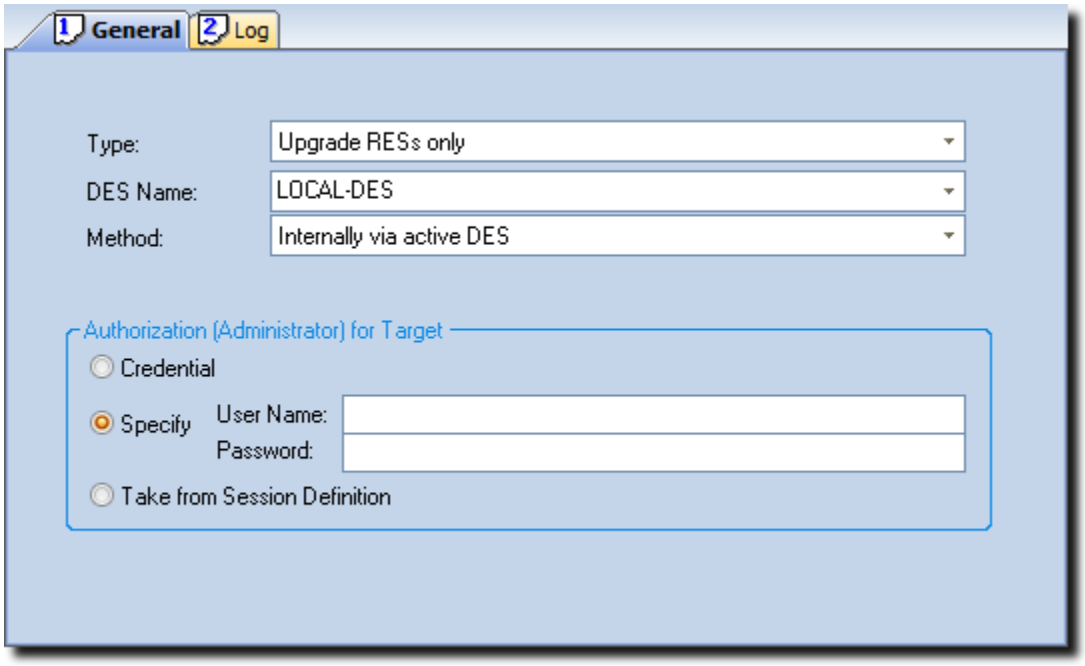
The Log tab provides a list of the actions that the Event24x7 system is taking during the remote installation. It also reports whether the installation was successful or a failure.

8.5.3 Maintenance

Automatically replace all RESs under certain DES with newer version.

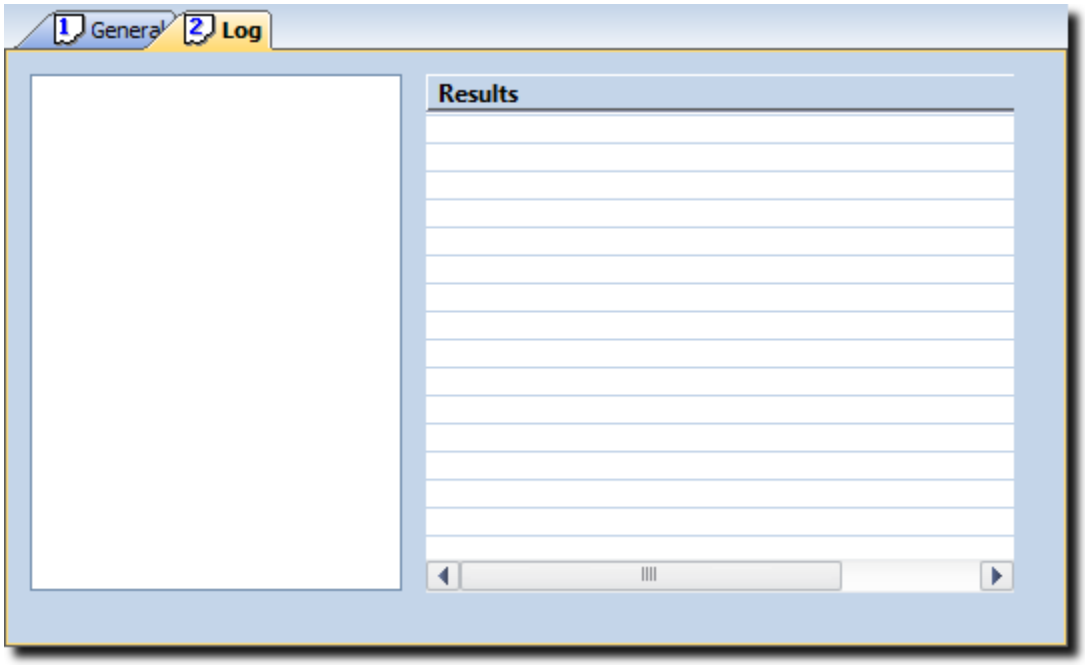


8.5.3.1 General tab



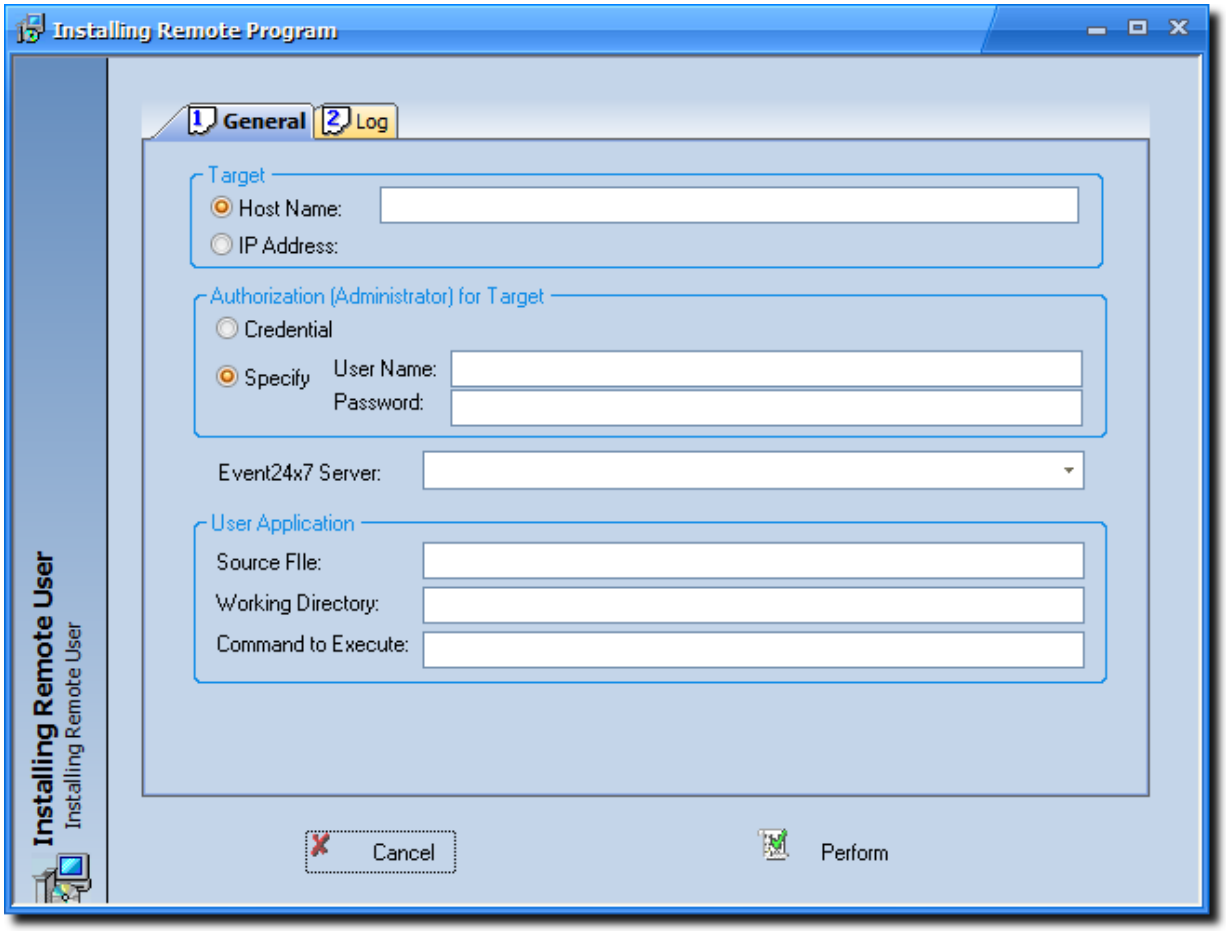
	Type	Select what to upgrade. Available options: Upgrade DES only. Upgrade RESs only. Upgrade DES and its RESs.
	DES Name	Select DES.
Authorization (Administrator) for Target	**Specify: User name**	User name to be used on remote server.
	Password	Password to be used on remote server.
	Take from Session Definition	Take to user and password from the Session definition.
Authorization (Administrator) for CES (if required)	**Same as Target**	Use the same user and password as specified for the target.
	Specify: User name	User name to be used for CES.
	Password	Password to be used for CES.

8.5.3.2 Log tab



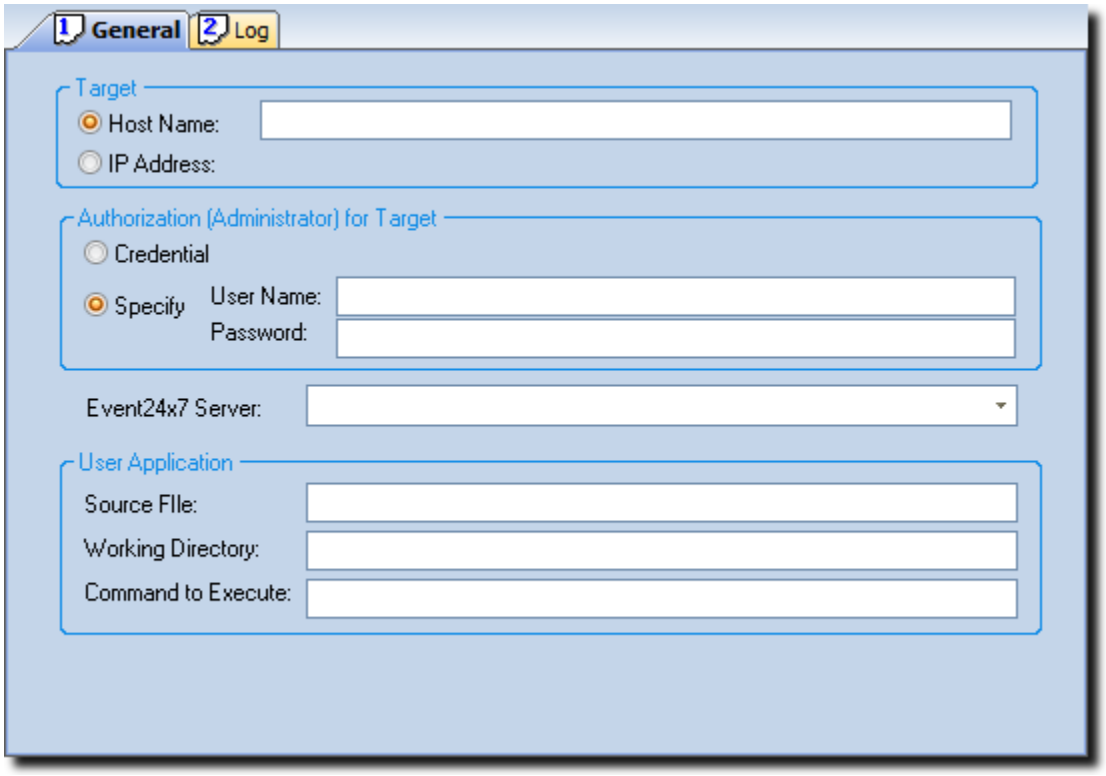
The Log tab provides the status of the upgrade action and its results.

8.5.4 Installing Remote Program



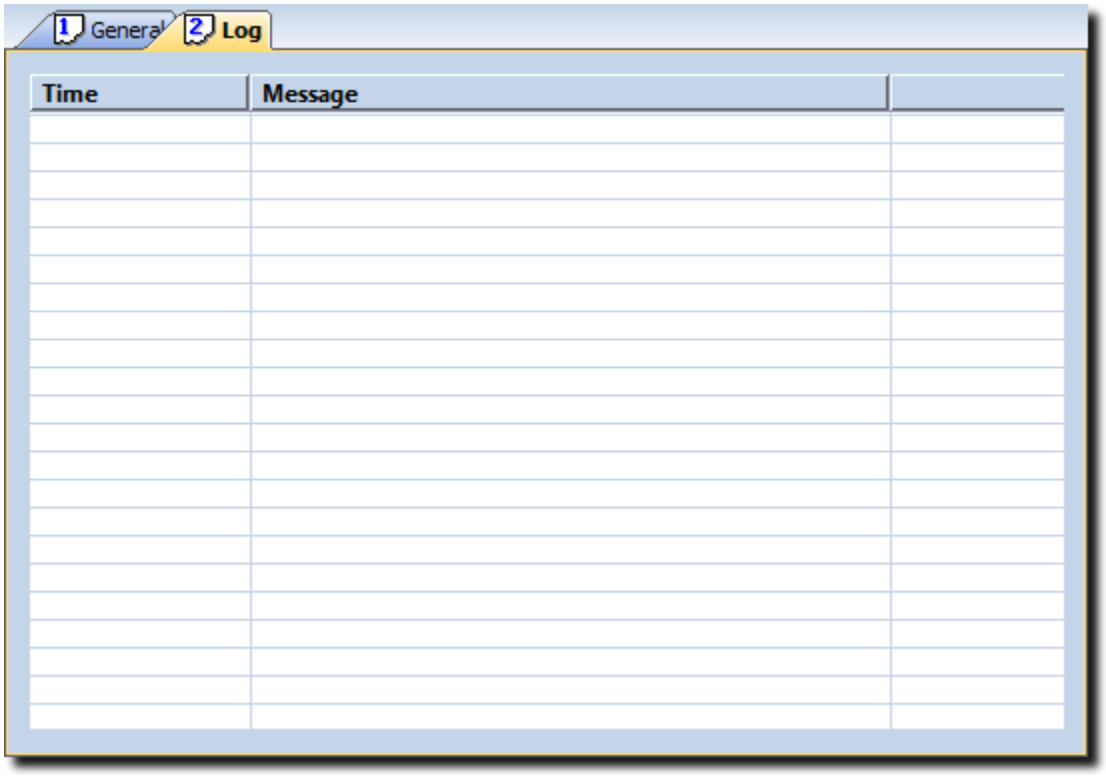
It uses to install any 3rd party program remotely.

8.5.4.1 General tab



Target	**Host Name**	Remote server host name.
	IP Address	Remote server IP address.
Authorization (Administrator) for Target	**Specify: User name**	User name to be used on remote server.
	Password	Password to be used on remote server.
	Event24x7 Server	Select the server to install from.
User Application	**Source File**	The source file path and name.
	Working Directory	The working directory on the remote server.
	Command to Execute	The command to execute on the remote server I order to initiate the installation.

8.5.4.2 Log tab

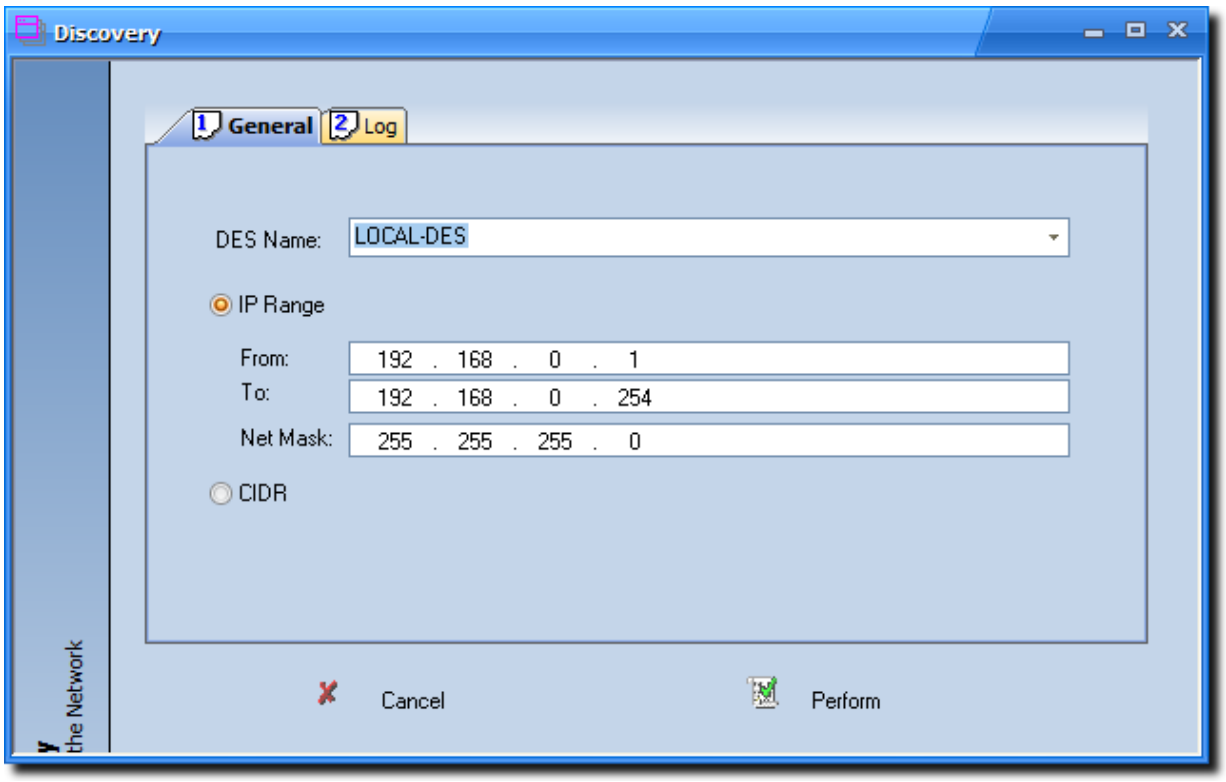


The Log tab provides a list of the actions that the Event24x7 system is taking during the remote installation. It also reports whether the installation was successful or a failure.

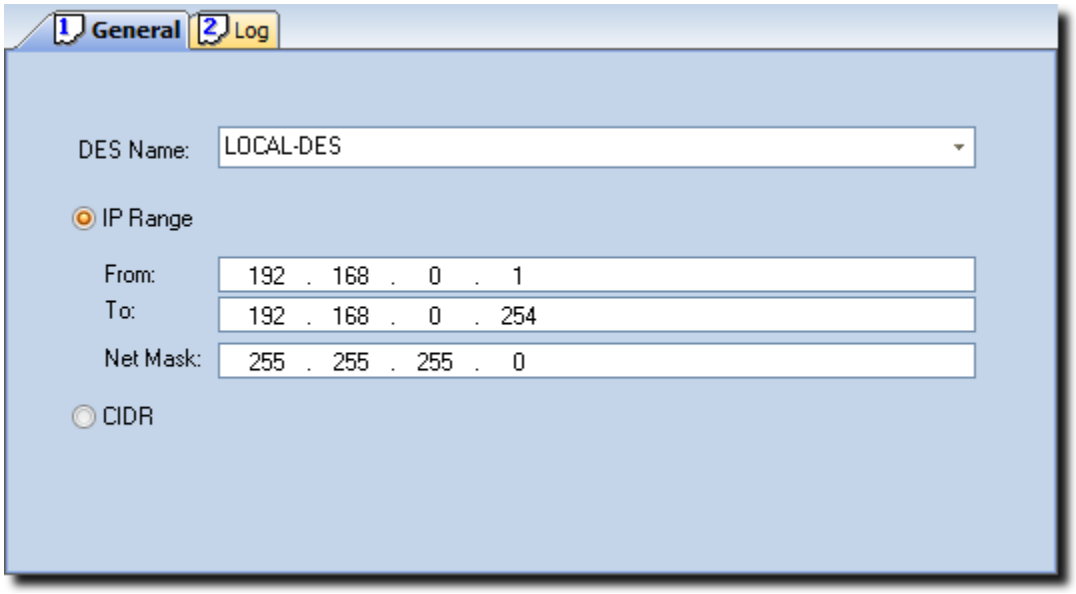
8.6 Discovery Capabilities

The ability to automatically identify network elements, choose the recommended skeleton and let you build Event24x7's sessions accordingly.

8.6.1 Discovery

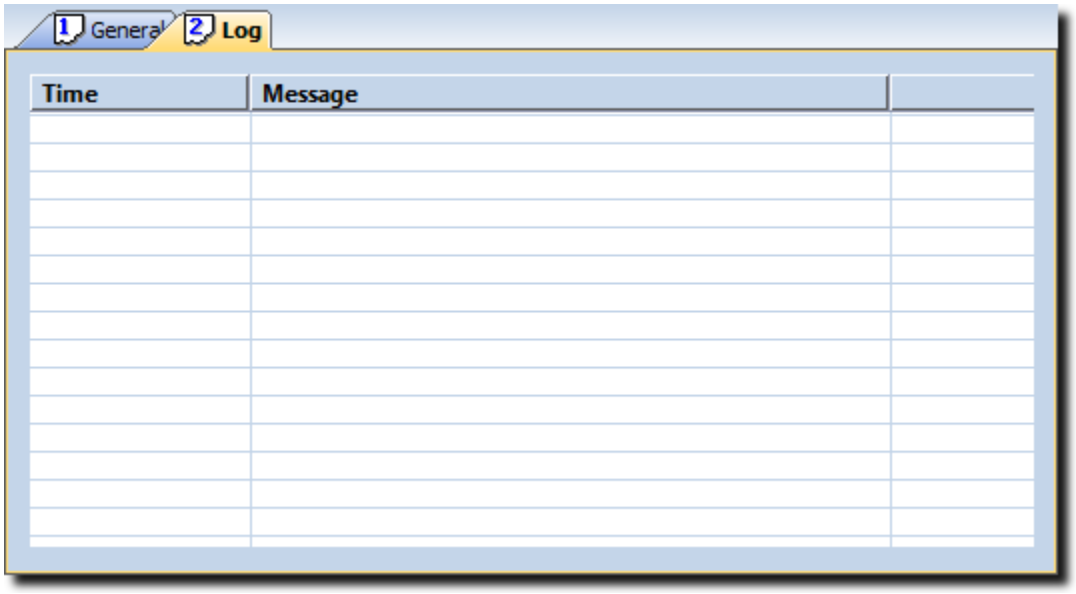


8.6.1.1 General tab



DES Name		Target DES to run the discovery.
IP Range	**From**	From IP to start the discovery.
	To	End IP to finish the discovery.
	Net mask	Valid Net mask.
CIDR	**IP**	From IP to start the discovery
	Bits	CIDR bits number.

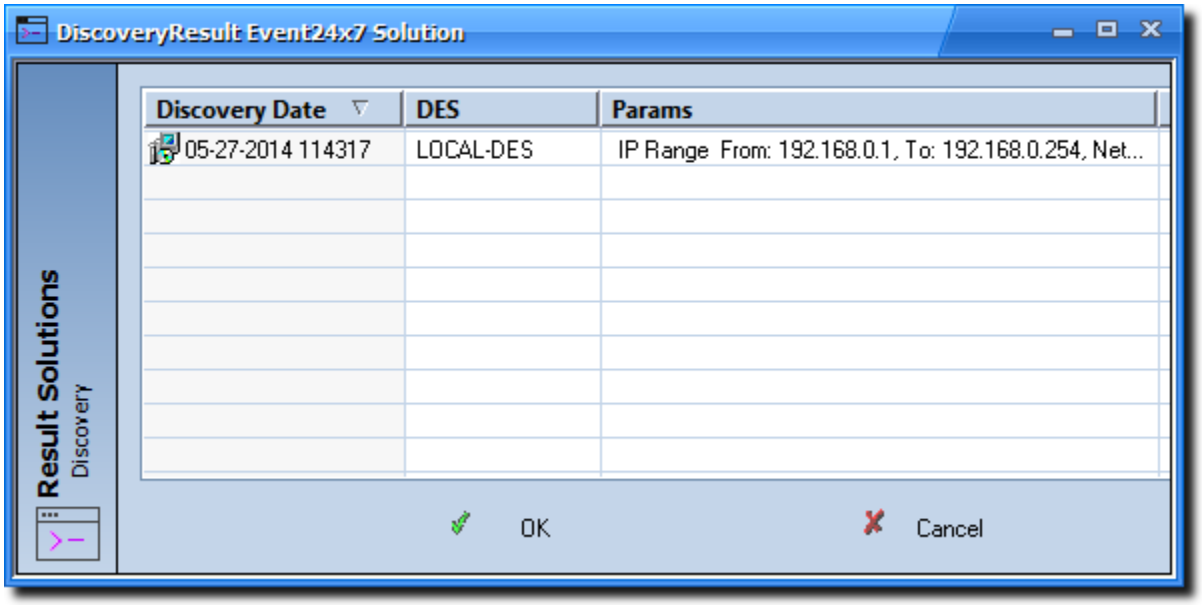
8.6.1.1 Log tab



The Log tab receives updates about the discovery process.
It display every element address that was found by the discovery process.

8.6.2 Results

Display the discovery processes that were ended.

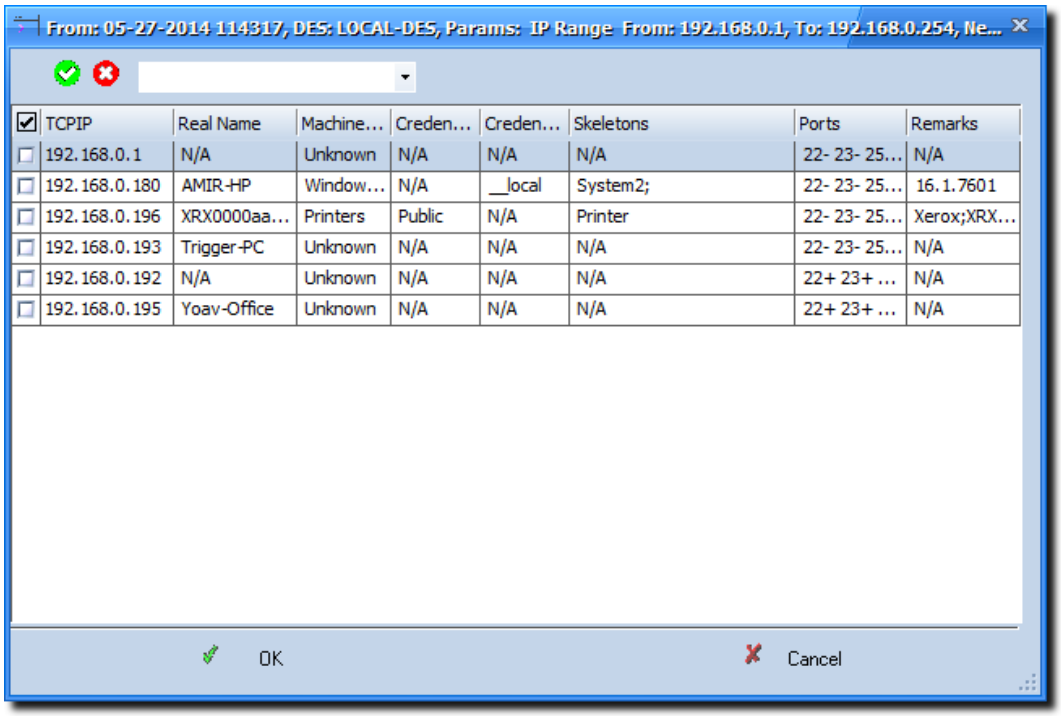


Every entry represents discovery process that was executed.

Select one of discovery from the list or left mouse double click the line in order to get the specific result of the selected discovery.

8.6.3 Create Sessions

Display the network elements from a single discovery process and let you create Event24x7's session for monitoring.


From: 05-27-2014 114317, DES: LOCAL-DES, Params: IP Range From: 192.168.0.1, To: 192.168.0.254, Ne...
TCPIP
Real Name
Machine...
Creden...
Creden...
Skeletons
Ports
Remarks
192.168.0.1 N/A Unknown N/A N/A N/A 22- 23- 25... N/A
192.168.0.180 AMIR-HP Window... N/A __local System2; 22- 23- 25... 16.1.7601
192.168.0.196 XRX0000aa... Printers Public N/A Printer 22- 23- 25... Xerox;XRX...
192.168.0.193 Trigger-PC Unknown N/A N/A N/A 22- 23- 25... N/A
192.168.0.192 N/A Unknown N/A N/A N/A 22+ 23+ ... N/A
192.168.0.195 Yoav-Office Unknown N/A N/A N/A 22+ 23+ ... N/A
OK
Cancel

TCPIP	TCPIP address of the element.
Real Name	Element network real name.
Machine Type	If the discovery was able to identify, otherwise it set to Unknown.
Credential SNMP	The name of the credential from the credential table if this element has SNMP connection.
Credential2	The name of the credential from the credential table for SSH or WMI connection.
Skeleton	Event24x7's Skeleton for creating the session.
Ports	Display status of selected ports. + indicate port is listening. The status display immediacy after the port number.
Remarks	Additional information if available. For example for printer it display the manufacture and model name.

9. Notification Center

Handle an open problem using Mail & SMS sending until an operator takes ownership on the problem or the problem is solved. This state of the art system enables you to send notifications and receive acknowledgements from the operators that are on duty, as well as to be notified on the current status of the problem handling.

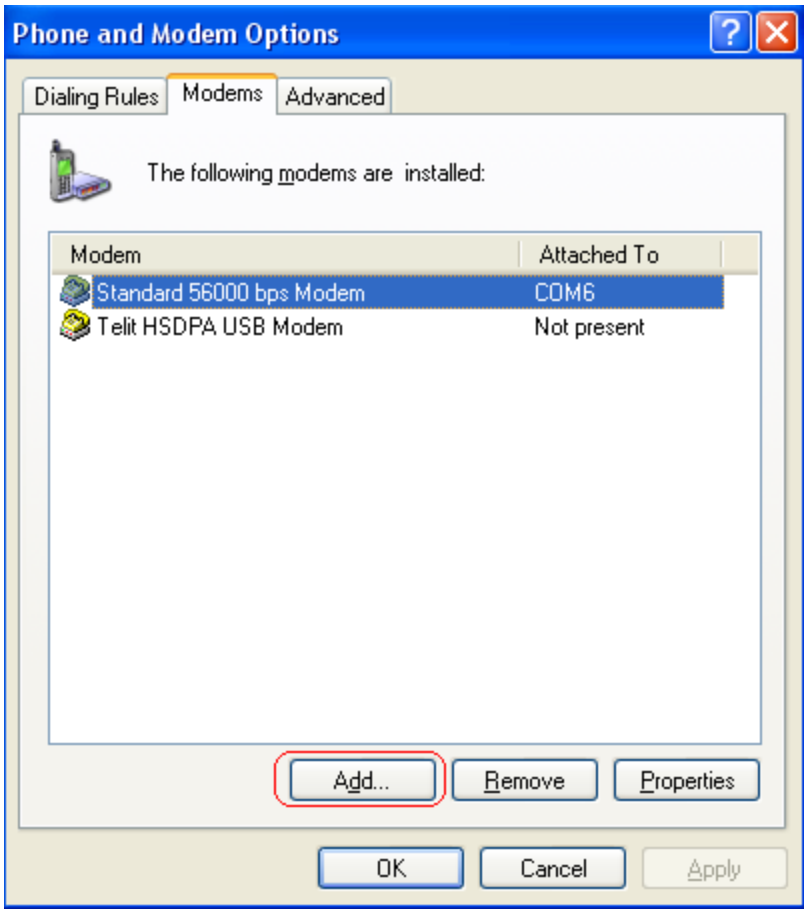
The Notification Center System enables you to send SMS in a very simple way and to manage problems in order to assure that an operator takes ownership on a problem.
Notification Center operates at DES level. It means that every DES can have its own system. In addition it enables passing handling of problems from one DES to another.
Another advantage is by the ability to handle several modems concurrently.
Notification Center can also work in broadcasting mode. It means sending a message without waiting for an acknowledgement.
The Notification Center find recipient by priorities or On Duty calendar.
SMS can be sent by all possible ways: modem, mail or provider.

Steps needed for using the Notification Center:
• If using wireless modem make sure it is connected and ready.
• Enable Notification Center at DES Definition.
• Define Recipients.
• Define Groups (how to handle single open problem).
• At Parameter Definition set Notification Center handle the problem.

9.1 Connecting Wireless Modem

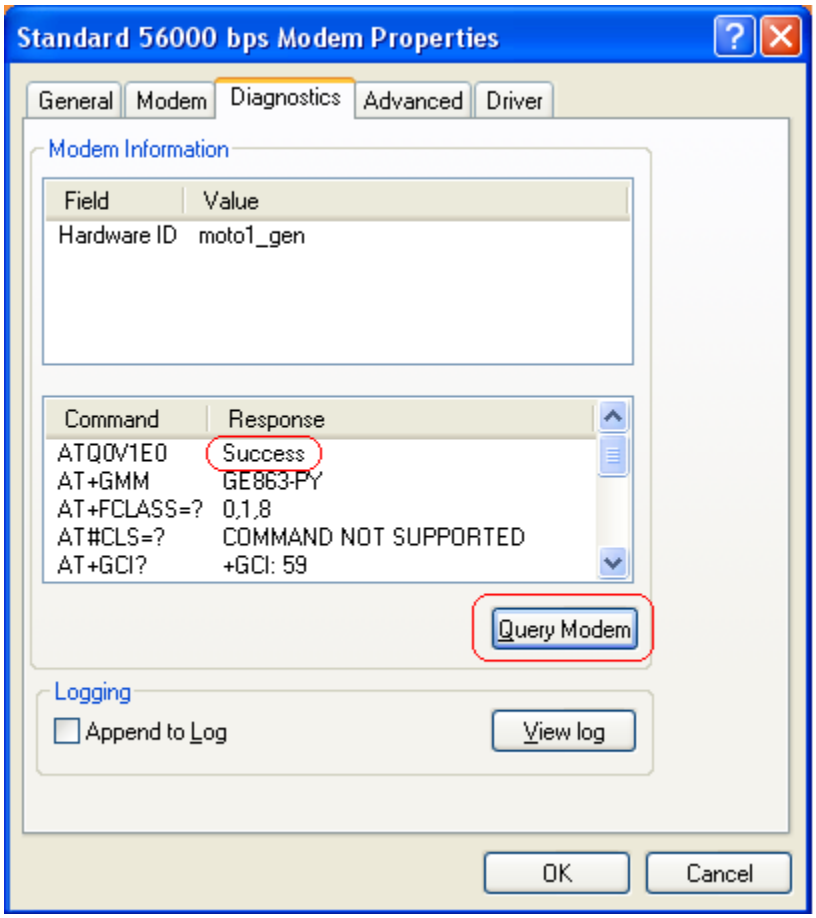
9.1.1 Add the modem to Windows:

Install the driver (is necessarily).
Control Panel->Phone and Modem Options->Modems-> Add
The new modem will get a port from windows.



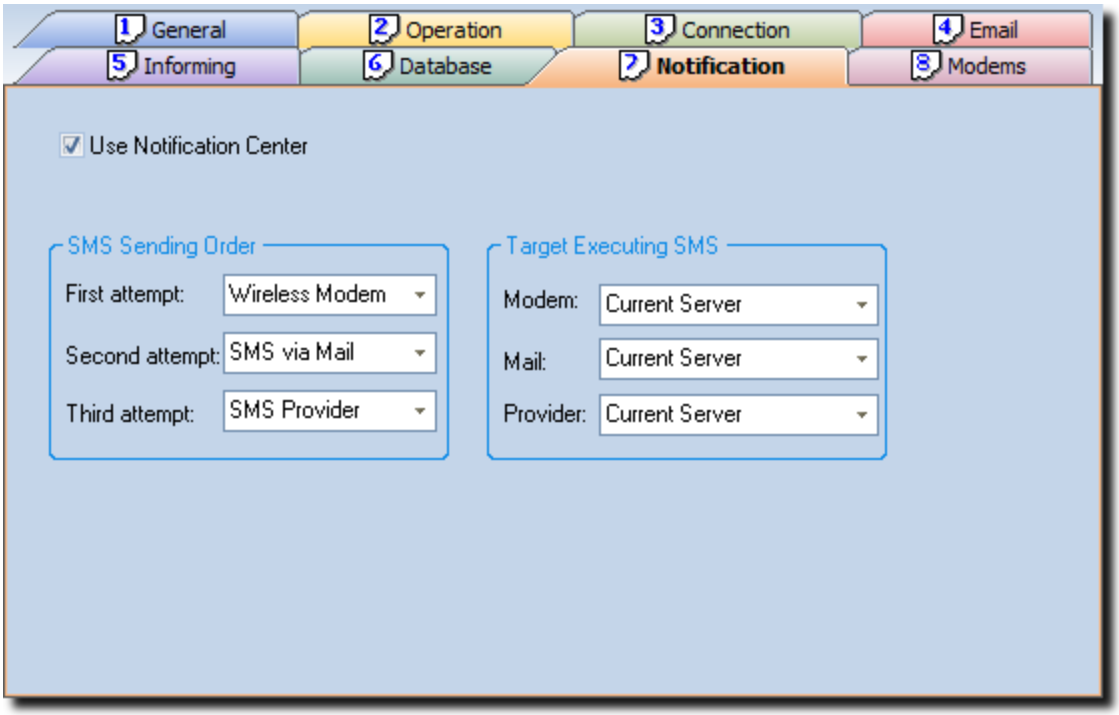
9.1.2 Testing the modem:

Select the modem and open the Properties->Diagnostics tab.
Use “Query Modem” button and verify that the modem answers successfully.



9.1.3 Enable Notification Center

Enabling the Notification Center is done from DES Configuration – Notification Tab.
Remember: Notification is at DES level.



SMS Sending Order

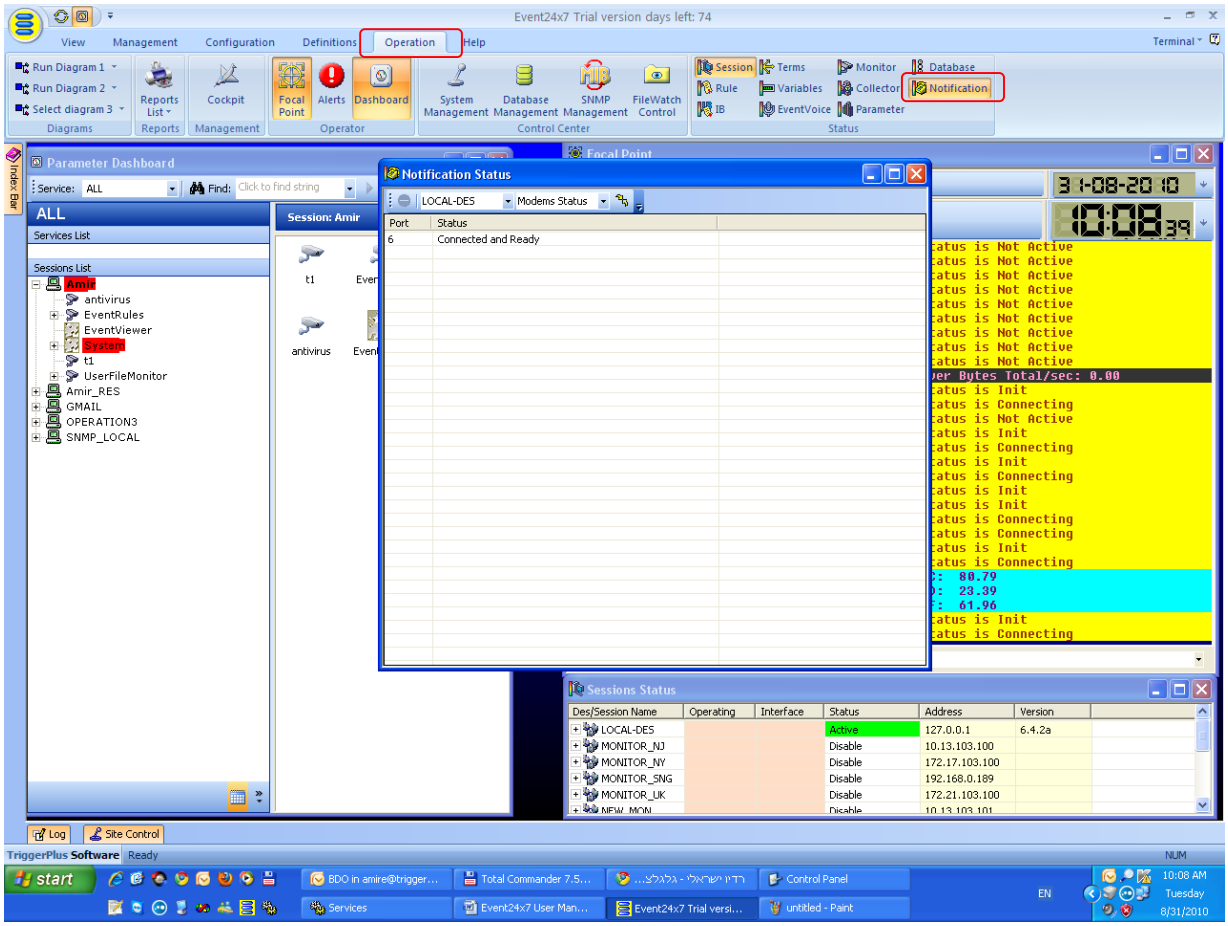
- There are three ways to send SMS:
  - Wireless Modem
  - Mail
  - SMS Provider
- Set the way to send SMS in each retry for every recipient.

Target Executing SMS

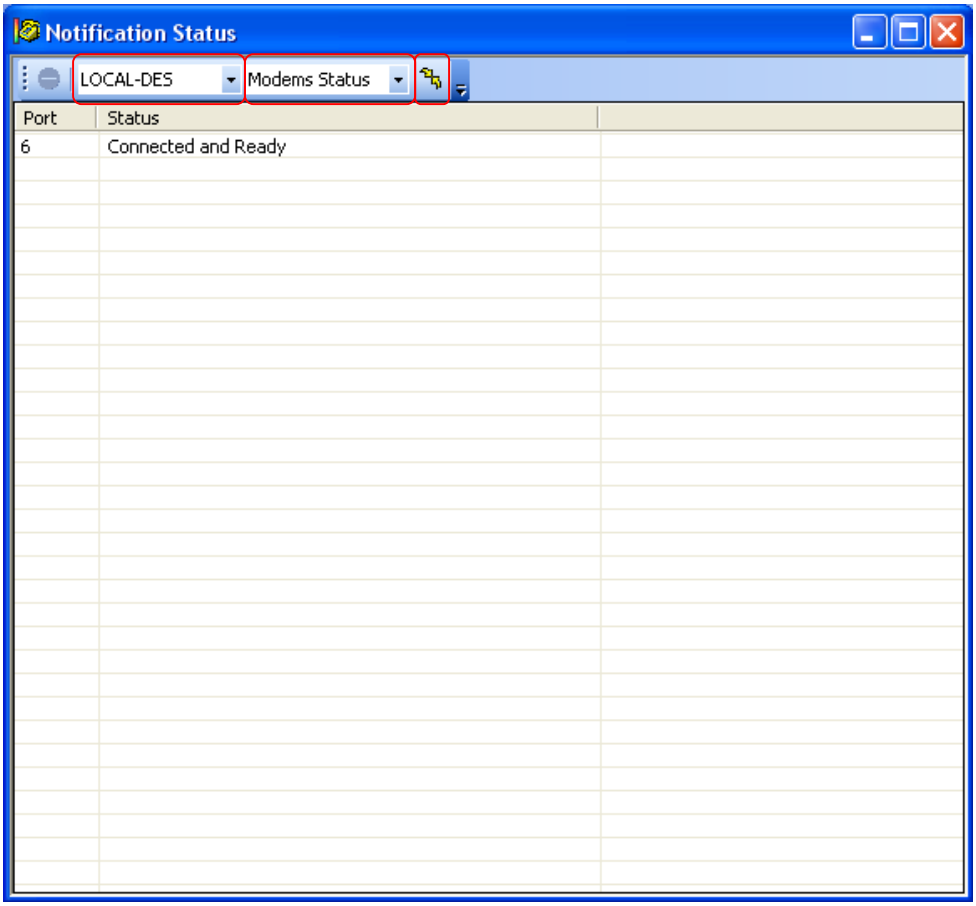
- By default SMS would be sent with local Notification Center.
- If you don't have wireless modem at current DES you can redirect the sending to other DES.

9.1.4 Modem connection in Event24x7

In order to check that the modem is connected and ready to work with Event24x7, you need to open the **Operation** menu and click on the **Notification Status**, on the right side of the menu, as shown below:



A new window called Notification Status will be opened:



Select the DES that the modem is connected to and select operation.
For example: in the picture above, the selected DES is – **Local-DES** and the selected operation is – **Modem Status**.
Now click on the **Refresh** button and the modem status will be displayed.
In the above picture – connected and ready on port 6.

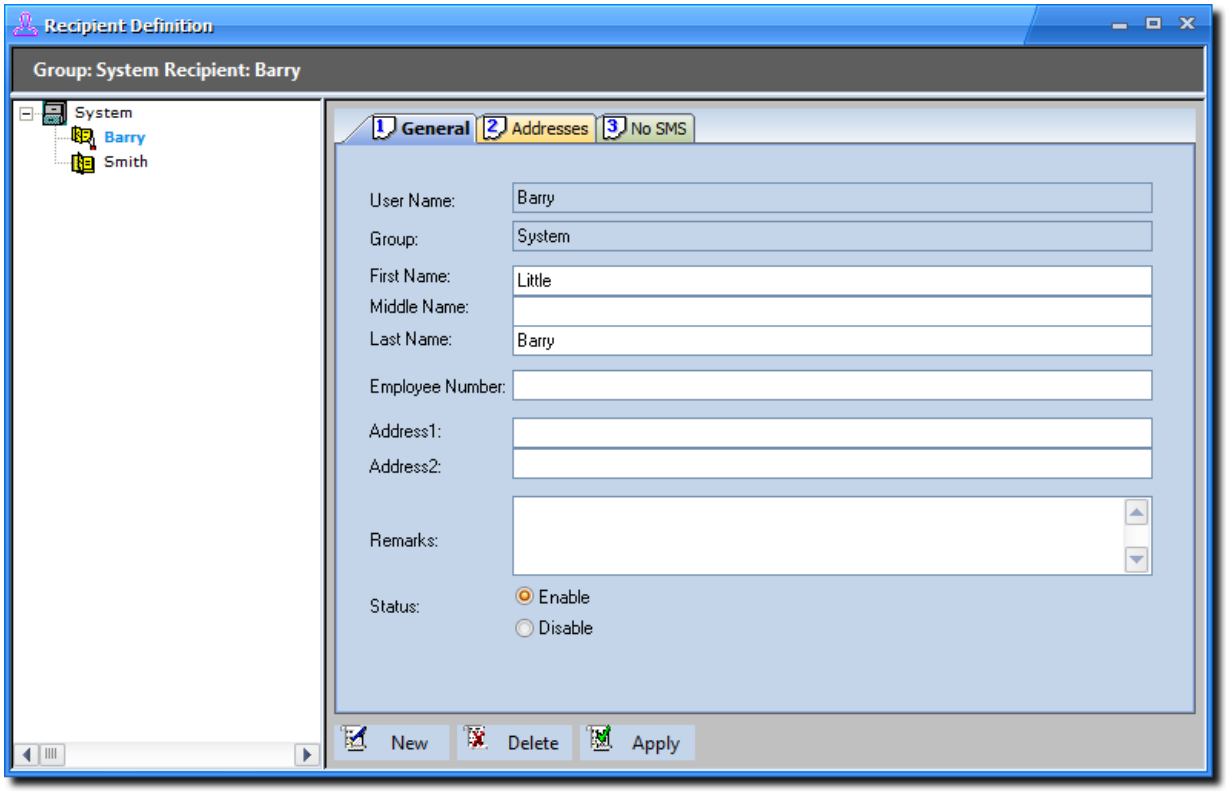
If the modem status is different than "Connected and Ready" then it will not work properly. In this case please check again that the modem is connected to windows according to the "Connecting Wireless Modem" paragraph on section 9.1.

Modem Operations:

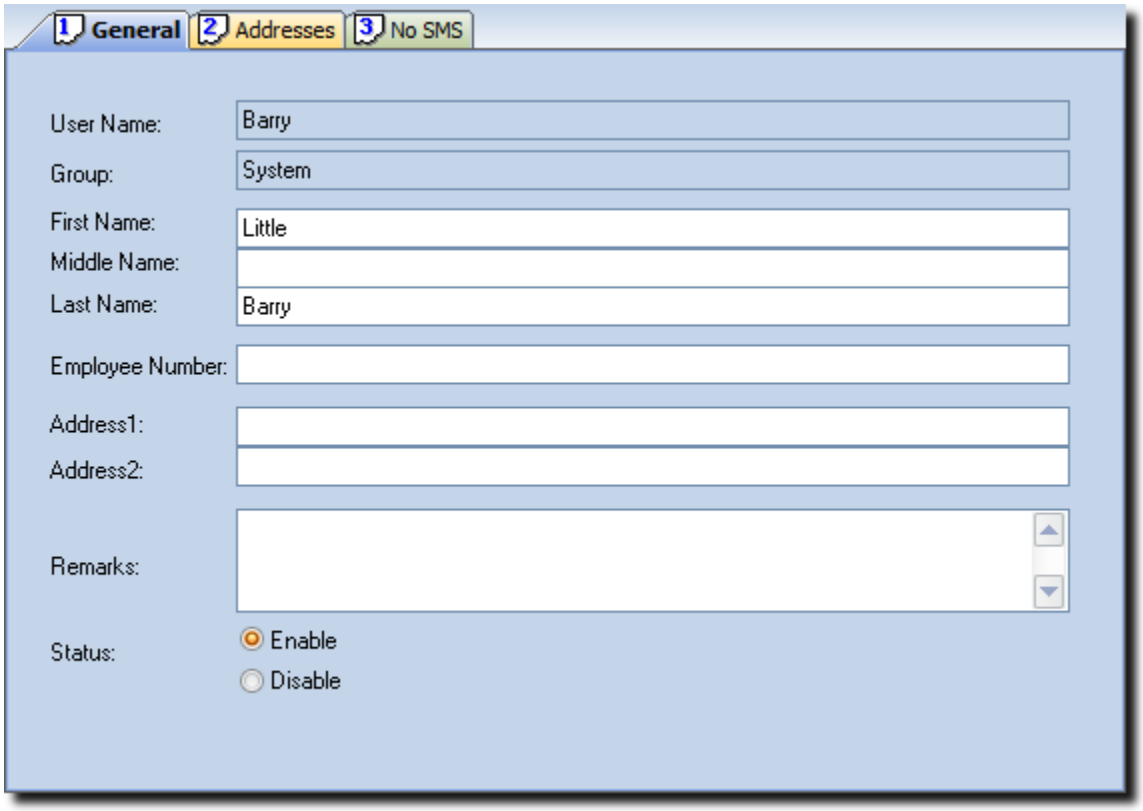
- Tickets – Display alert sending status.
- Modems Status – Display connected modems status.
- Modem Logs – Display connected modems logs.

9.2 Recipient Definition

Define recipients to be notified in case of an alert.



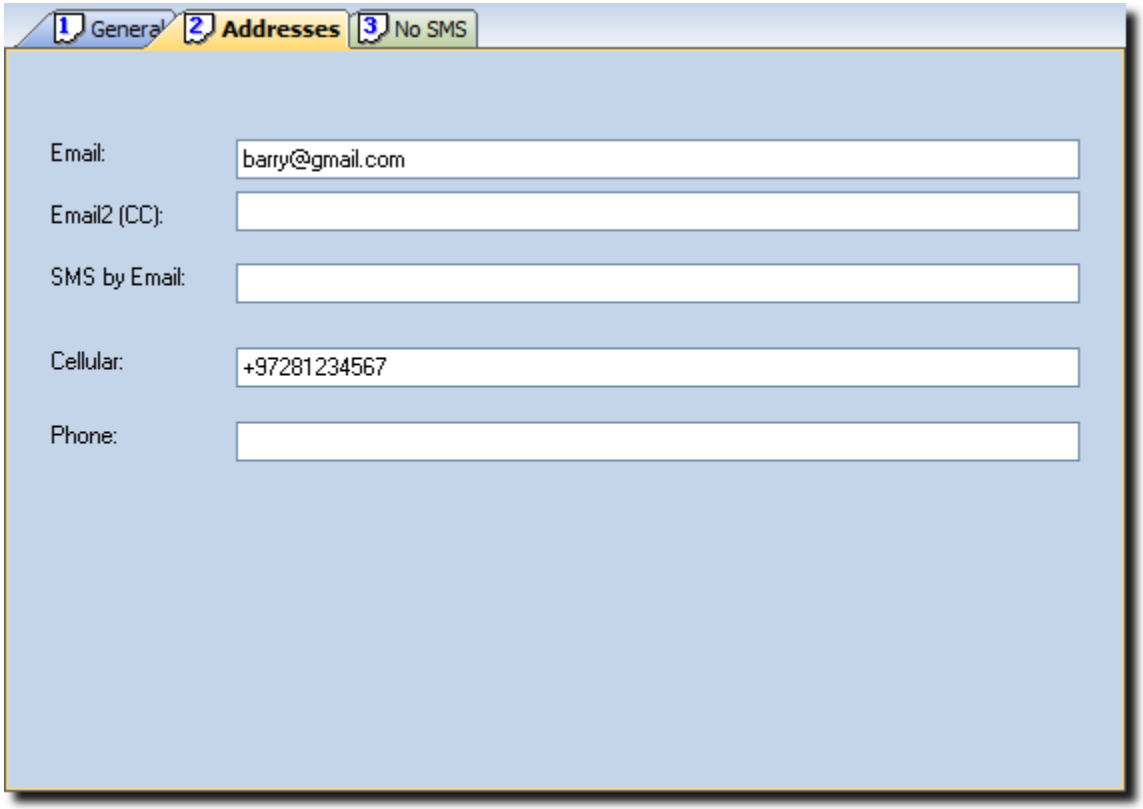
9.2.1 General Tab



User Name	Recipient unique identifier.
Group	Group name of recipients.
First Name	Recipient's first name.
Middle Name	Recipient's middle name.
Last Name	Recipient's last name.
Employee Number	Recipient's employee number.
Address 1	Recipient's address 1.
Address 2	Recipient's address 2.
Remarks	General remarks.
Status	Enable or Disable this recipient.

9.2.2 Addresses Tab

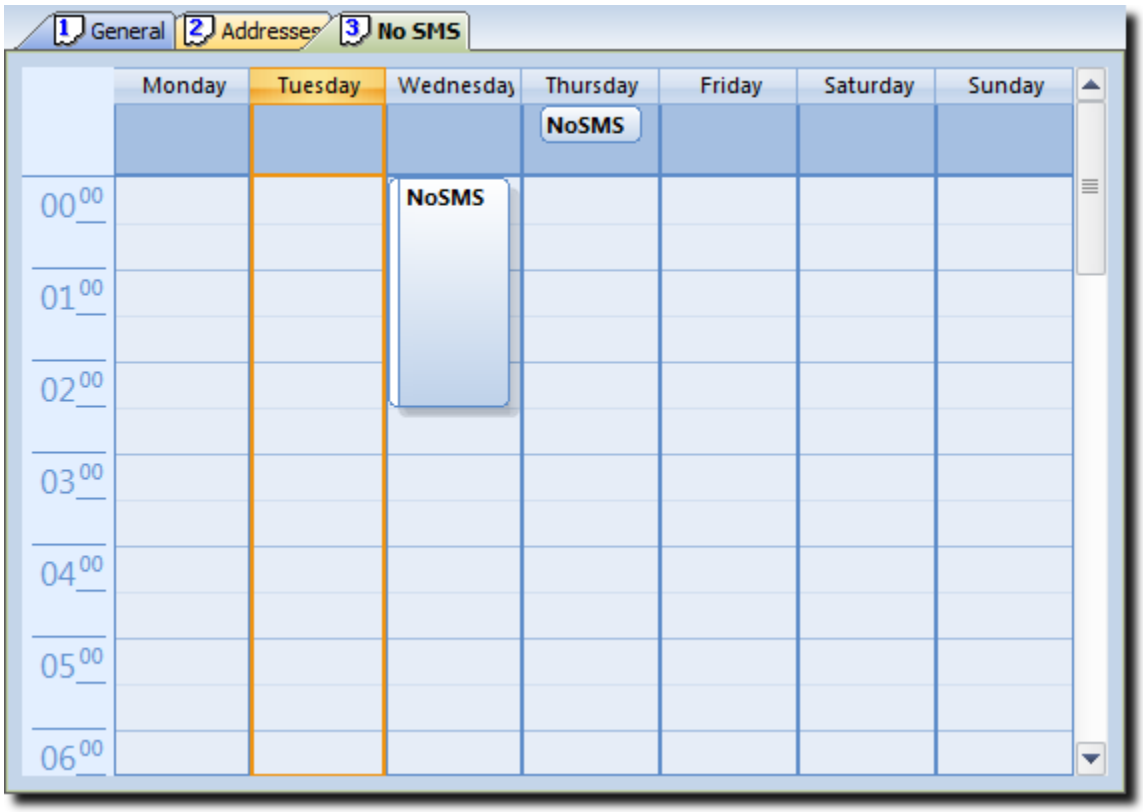
The Addresses tab is used to define recipient's Email and SMS details.



Email	Recipient's email address.
Email2 (CC)	Recipient's second email address (for CC).
SMS by Email	The email address for SMS by Email service provider.
Cellular	Recipient's cellular number.
Phone	Recipient's phone number.

9.2.3 No SMS Tab

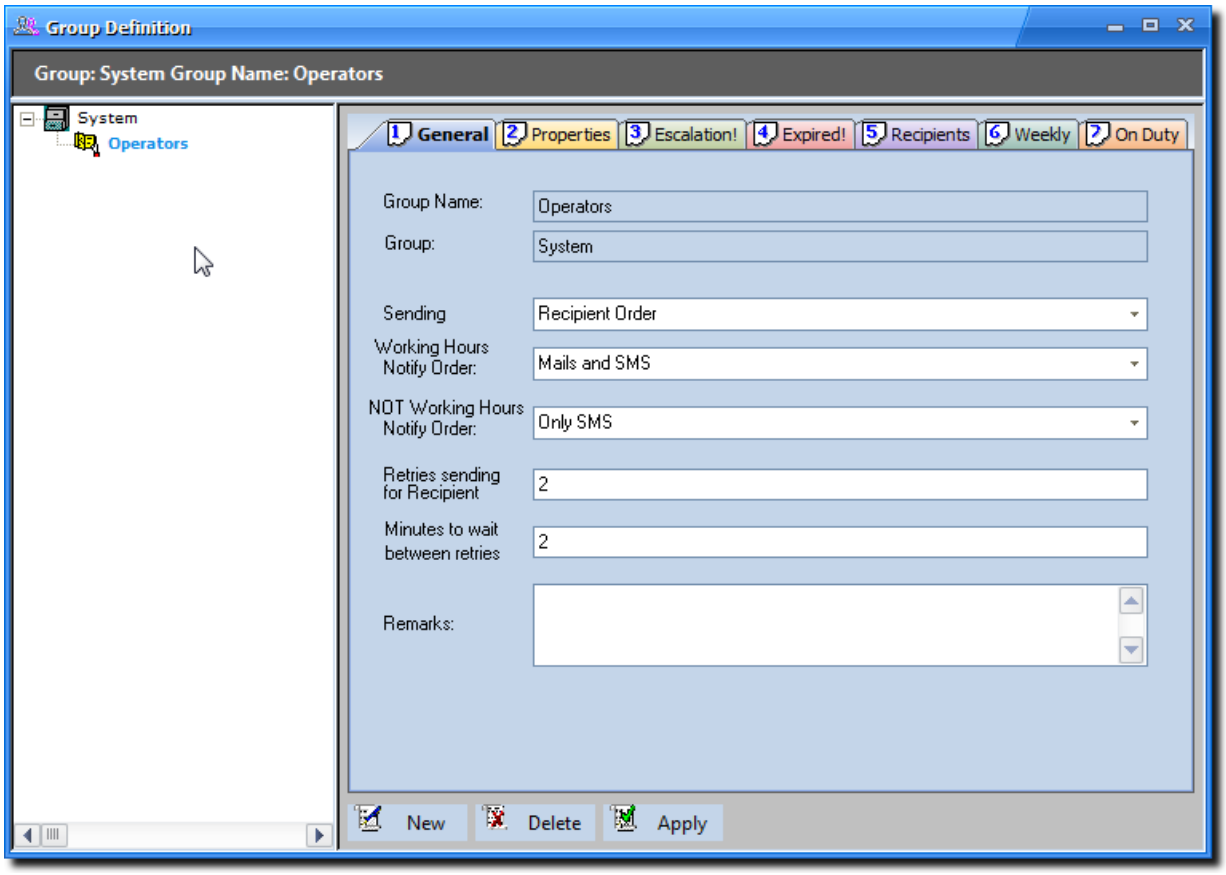
The No SMS tab is used to define the times during the week on which the Event24x7 system will not send emails and SMS to the recipients. (for broadcasting mode only).



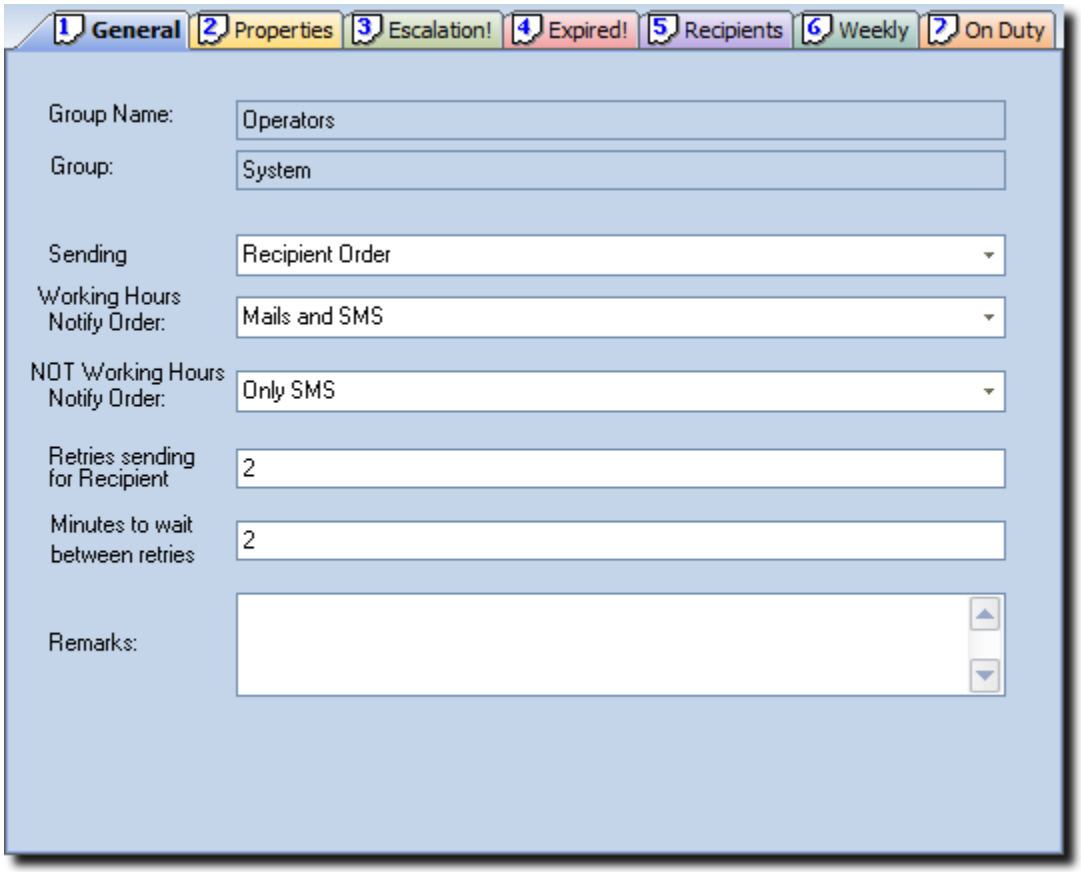
Email	Recipient's email address.
Email2 (CC)	Recipient's second email address (for CC).
SMS by Email	The email address for SMS by Email service provider.
Cellular	Recipient's cellular number.
Phone	Recipient's phone number.

9.3 Group Definition

Define groups of recipients to be notified in case of an alert and the method of alerting them.



9.3.1 General Tab



Group Name Group unique identifier.

Group Group name for recipient's group definition.

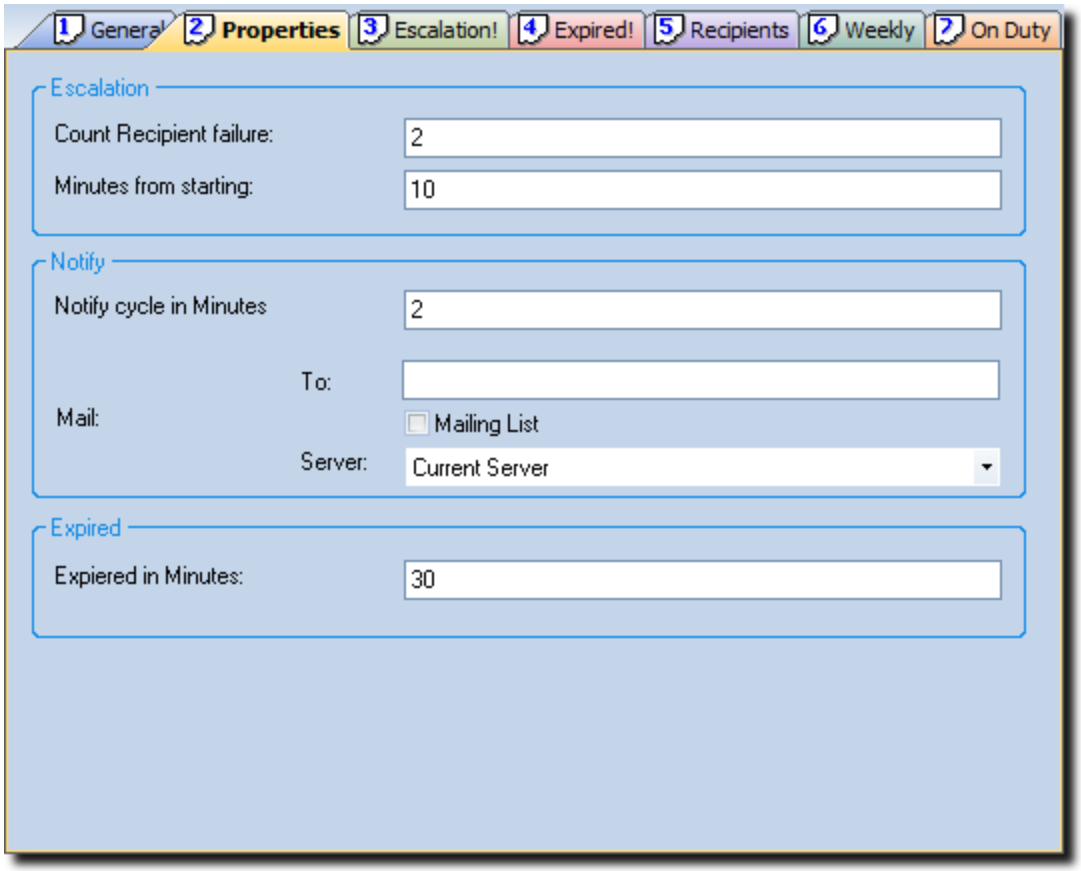
Sending Order Define the order for sending the alerts.
Available options: Recipient Order
Send to all Simultaneously
According to Weekly Calendar
for future use: According to On Duty Calendar.

Notify Order Define the notification method for sending the alerts.
Available options: Only Mails
Mails and SMS
Only SMS
Start mail, Retries SMS
Start mail, Escalation SMS.

Retries sending for Recipients	The number of sending retries for each recipient.
Minutes to wait between retries	The number of minutes to wait between retries.
Remarks	General remarks.

9.3.2 Properties

The Properties tab is used to define the Escalation and Expired states. It is also used to define notification of a higher level manager about the status of the alert and the actions made so far by the Event24x7 system.

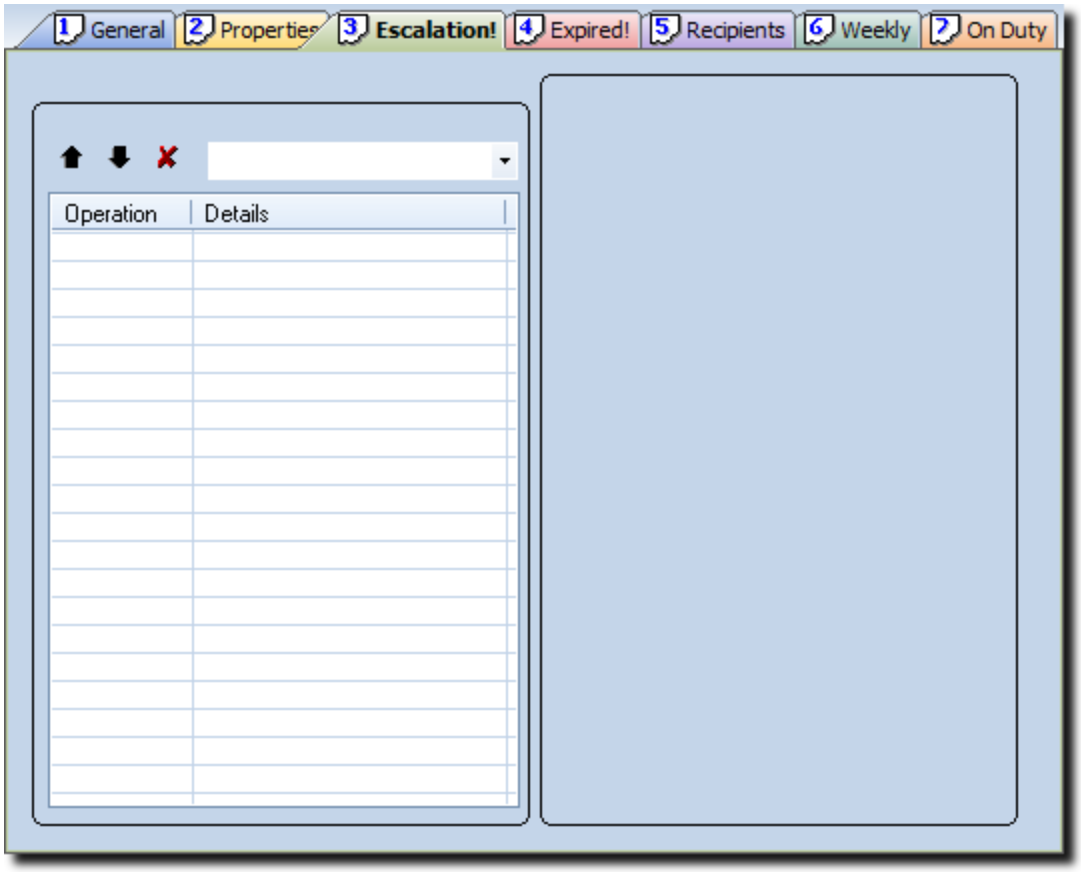


Escalation	**Count Recipient failure**	Number of unresponsive recipients before entering Escalation state.
	Minutes from starting	Number of minutes before entering Escalation state.
Notify	**Notify cycle in minutes**	The number of minutes between sending a notification to the higher level manager.
	Mail To	Set the recipient mail address.
	Mailing List	Set this field to send the mail to a mailing list.

		In this case the **Mail To field** points to a Mailing List that is defined at the Script definition.
	Mail Server	The mail server name.
Expired	**Expired in minutes**	Number of minutes before entering Expired state.

9.3.3 Escalation!

The Escalation! Tab defines the action's command that should be taken when reaching Escalation state.



All available actions are explained in section 6.10.

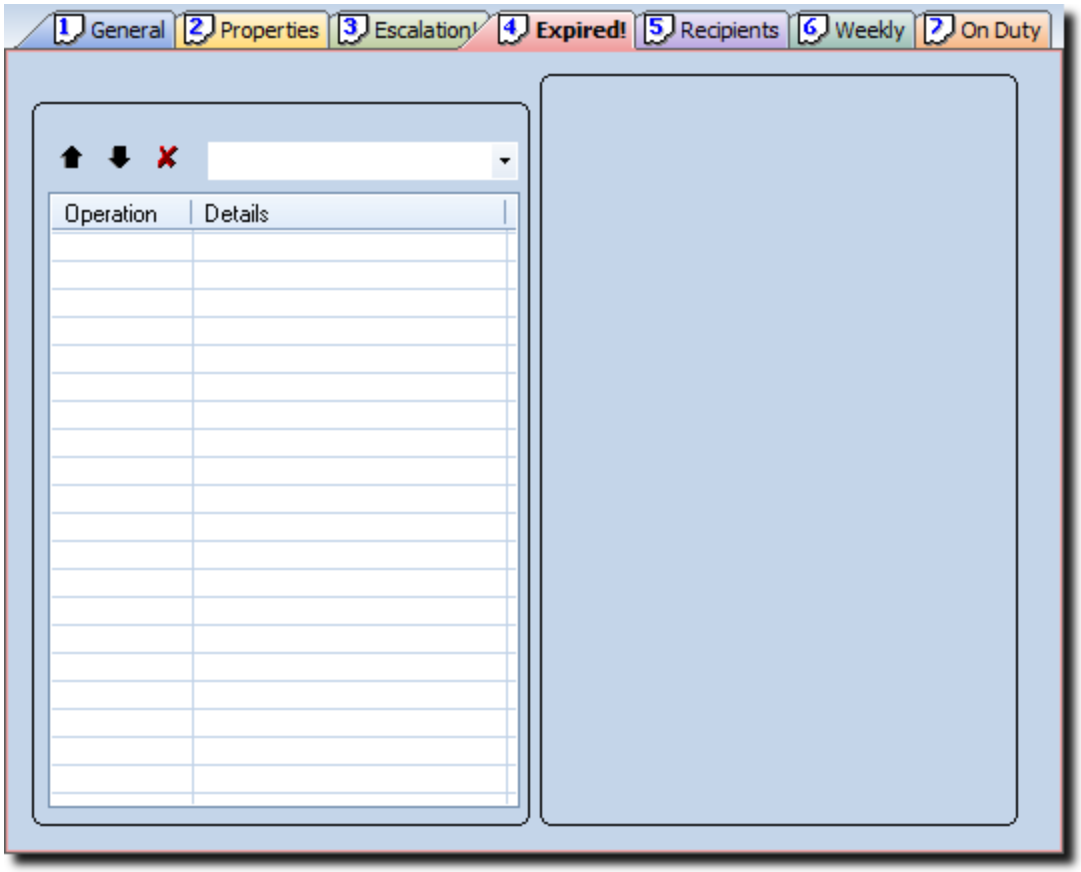
The Escalation! Tab may contain any number of action commands. Execution of the commands is done sequentially from the first to the last.

Using Event24x7 Variable in Action!

When adding actions in Escalation! Tab you can use Event24x7 System variables (prefix of $$#) and global User variables (prefix $$) in the parameters. See Special Variables section for more details.
When executing the **Escalation! Tab** Statements, it first checks whether the statement contains Event24x7 variables. If it does, it first changes each variable to the variable value and only then executes the action.

9.3.4 Expired!

The Expired! Tab defines the action's command that should be taken when reaching Expired state.



All available actions are explained in section 6.10.

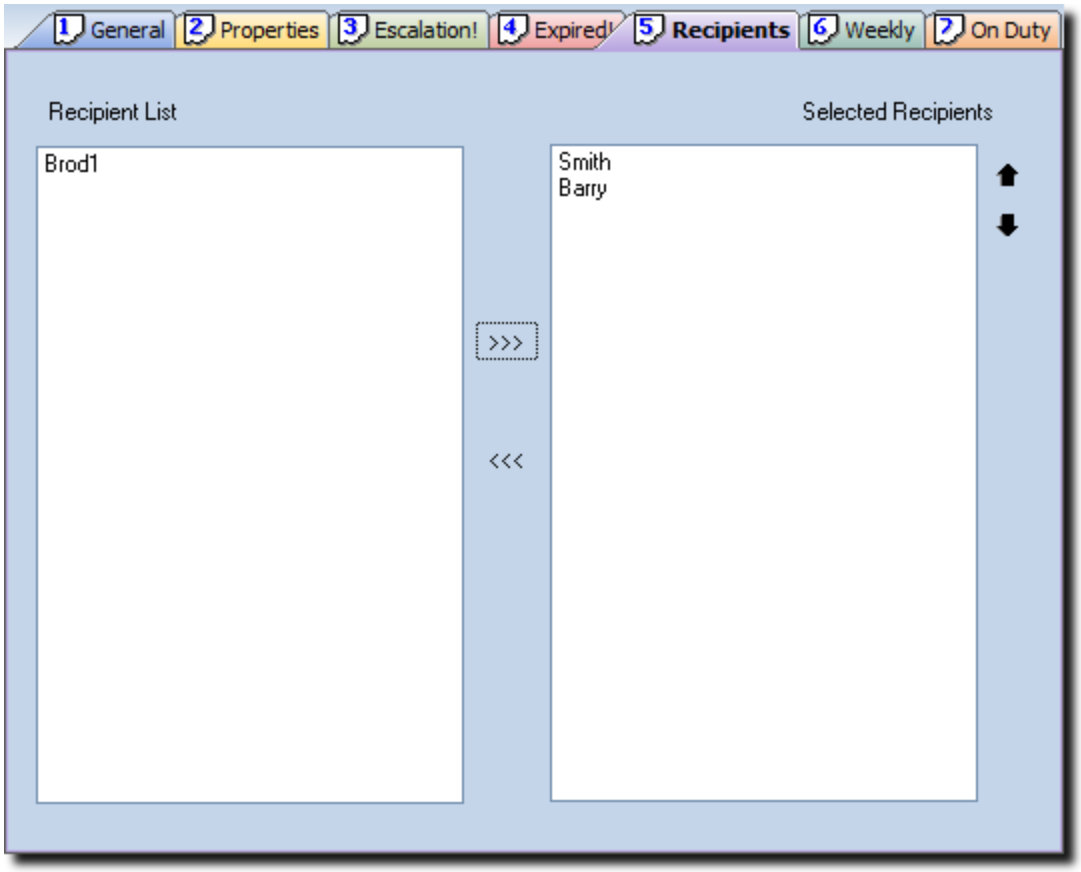
The Expired! Tab may contain any number of action commands. Execution of the commands is done sequentially from the first to the last.

Using Event24x7 Variable in Action!

When adding actions in Expired! Tab you can use Event24x7 System variables (prefix of $$#) and global User variables (prefix $$) in the parameters. See Special Variables section for more details.
When executing the **Expired! Tab** Statements, it first checks whether the statement contains Event24x7 variables. If it does, it first changes each variable to the variable value and only then executes the action.

9.3.5 Recipients

The Recipients tab allows you to select the recipients to be included in the group from the entire recipient list and to define the sending order inside the group.

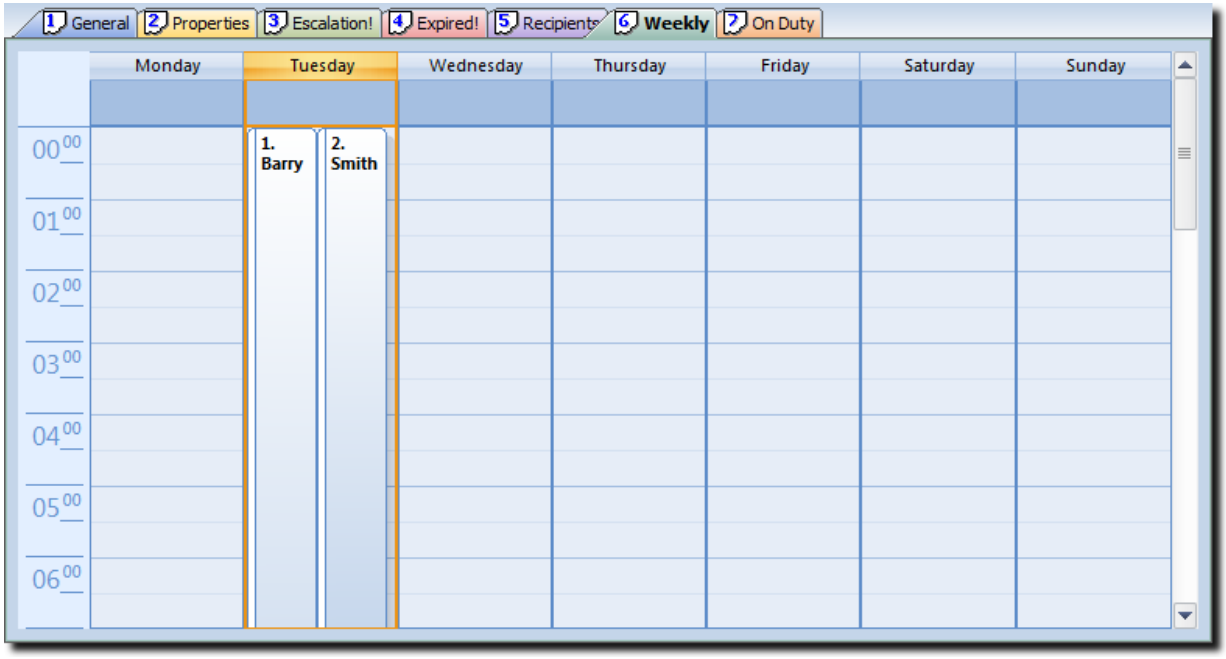


Recipient List The entire recipient list.

Selected Recipients Selected recipients for the group.

9.3.6 Weekly

The Weekly tab is used to define Recipients according to weekly calendar.



Setting recipient

Open meeting with duration as the recipient's duty.

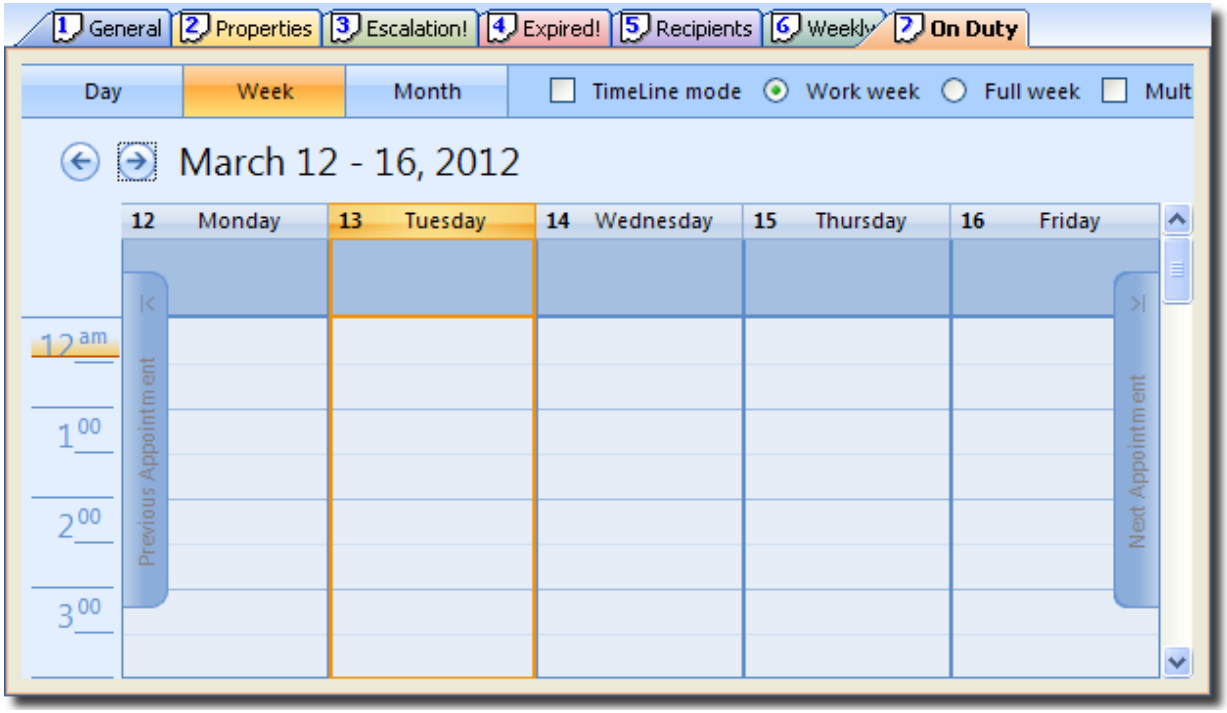
Meeting subject should be recipient name.

When setting secondary recipient - number the recipient name according to the order.

Setting recipient at all day duty.

9.3.7 On Duty

The On Duty tab is used to define Recipients according to days on the calendar.



Currently not operational - for future use.

9.4 Using Notification Center

Using Notification Center is possible in two ways:

• From Parameter Action! tab:

1. Available Notification Center commands:

Notification Center

Activate the Notification Center for the current Parameter.
Values here override the Group definition.
Require Notification command at OK state also.

Notification Acknowledgement

Acknowledgement for mail.
Need to define email session and set interception command to perform the Acknowledgement.

Notification SMS Immediate

Send SMS via the wireless modem.
This is the simplest way to send SMS.

• From Parameter Properties tab:

2. Enable Handle Notification.
   Advantage: single place to handle Opening and closing of problem.

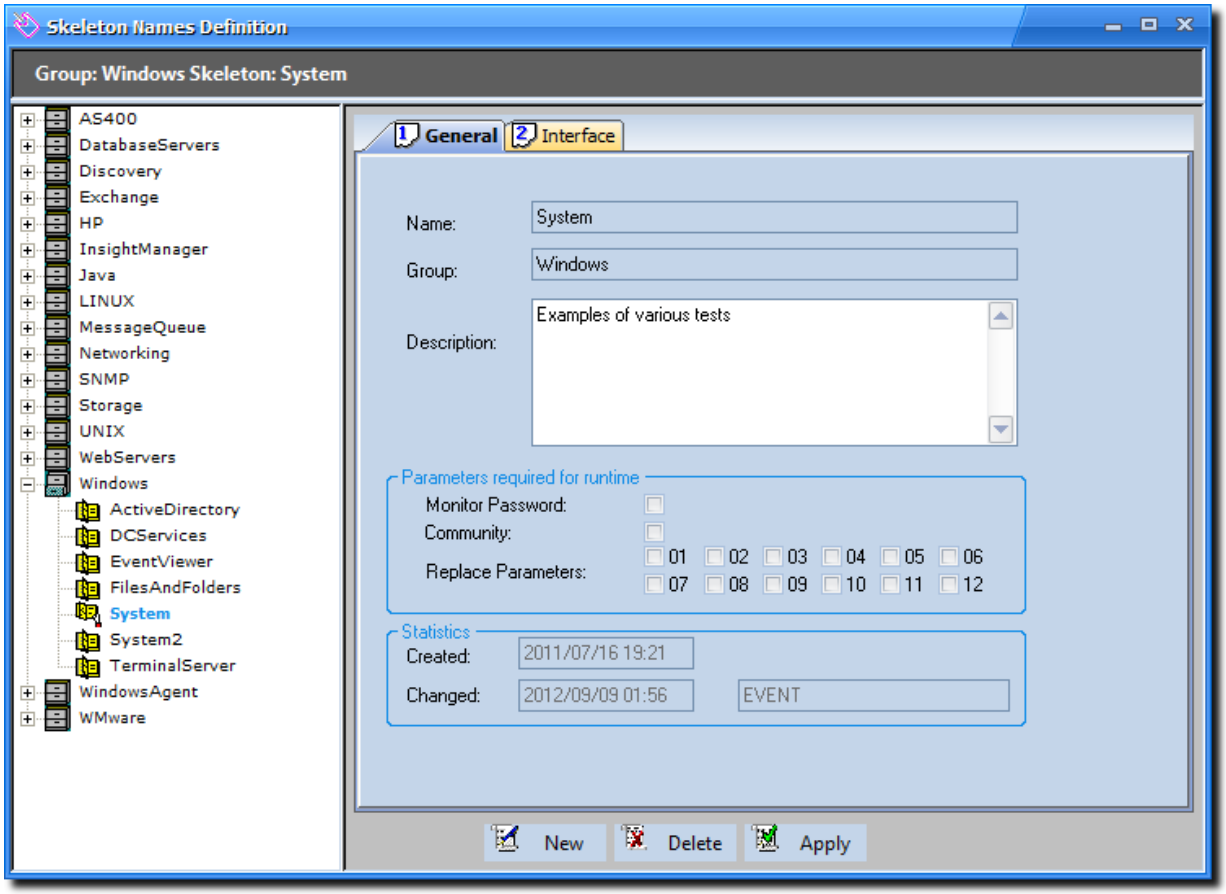
10. Skeleton

Define Skeletons for all types of sessions –Windows, UNIX and Linux servers, Network objects, Agent (RES), Agentless (WMI), SNMP or TCPIP. From each skeleton you can create as many sessions as you want and update all of them from one location. Changes in the skeleton will affect all of the sessions created from it.

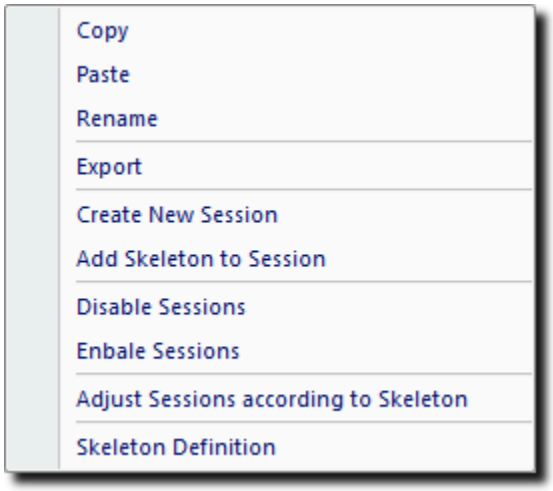
Session might be built from several Skeletons.

10.1 Skeleton Names

Define and manage skeleton's entries. From this window you can copy, paste, rename create new session from skeleton, enable or disable all session that were created from a skeleton, adjust sessions according to skeleton and open the Skeleton Definition.



Right click on one of the skeletons will open the following local menu:

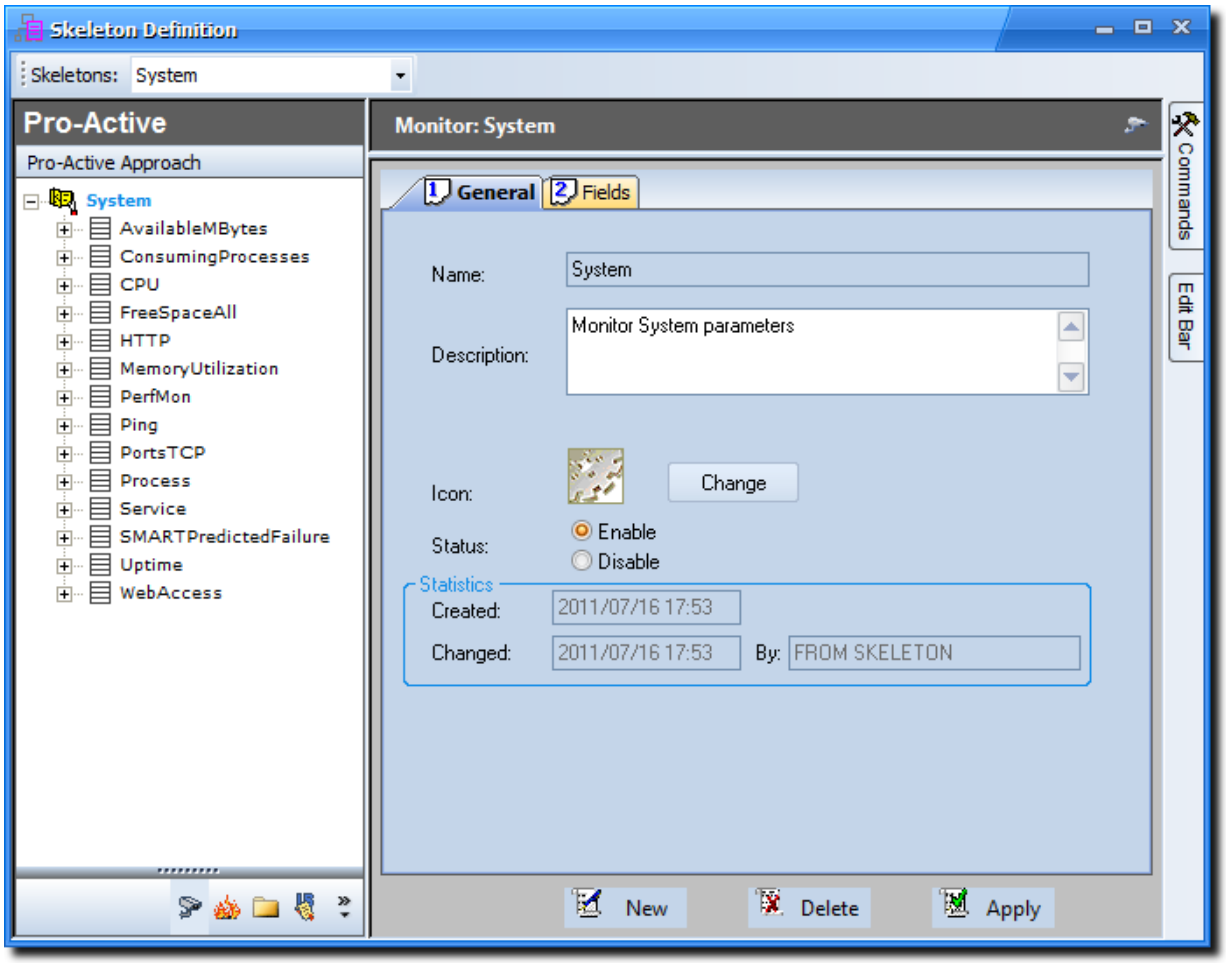


Copy	Copy skeleton
Paste	Paste skeleton
Rename	Rename skeleton
Export	Export current skeleton
Create New Session	Create a new session from selected skeleton, with current skeleton's definitions
Add Skeleton to Session	Add the current Skeleton to an existing Session.
Disable Sessions	Disable all sessions created from selected skeleton
Enable Sessions	Enable all sessions created from selected skeleton
Adjust Sessions according to Skeleton	Change all session created from selected skeleton, according to current skeleton's definition
Skeleton Definition	Open Skeleton Definition window

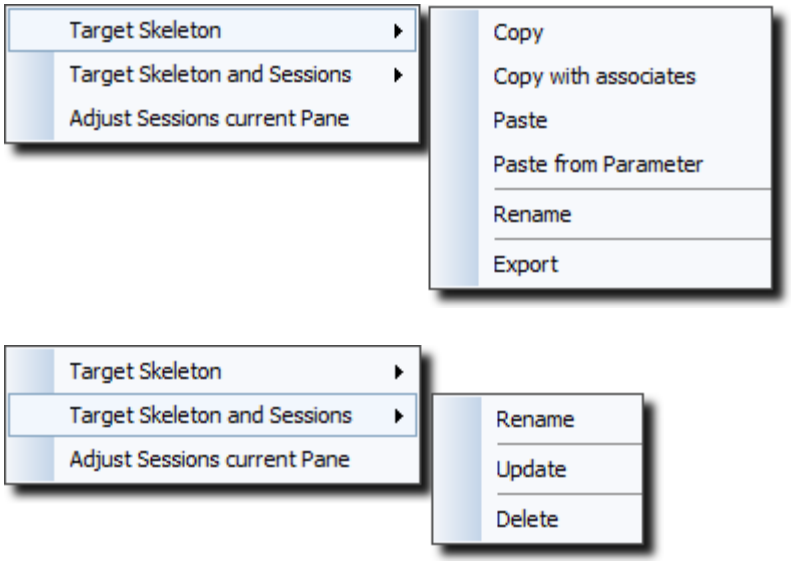
10.2 Skeleton Definition

Manage the skeleton's monitoring definition. Change, copy, add, remove or create new monitors, collectors and parameters inside the Proactive, Exception, File Watch or IB tabs. All of the definitions made here will be applied in the sessions that will be created from the skeleton. You can update only a single object or the entire skeleton and send the changes to all of the sessions.

The skeleton's definition window is identical to the Monitoring Definition window of any session.



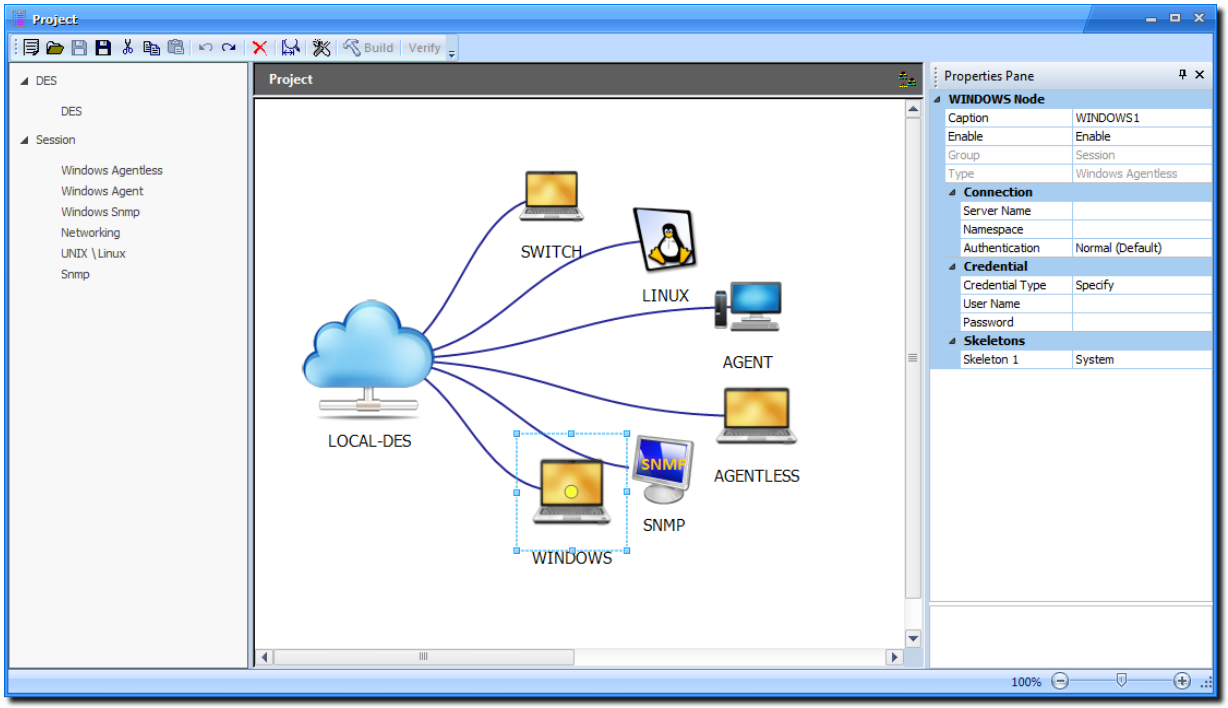
Right click on one of the tree objects will open the following local menu:



Target Skeleton ***(Affects only the skeleton)***	**Copy**	Copy a single object
	Copy with associates	Copy an object with its associates
	Paste	Paste an object with/without its associates
	Paste from parameter	Paste an object copied from a parameter definition
	Rename	Rename an object
Target Skeleton and Sessions ***(Affects both the skeleton and the sessions)***	**Rename**	Rename an object. Affects the skeleton and the sessions
	Update	Update an object in the sessions, according to skeleton
	Delete	Delete an object on both the skeleton and the sessions
Adjust Sessions current Pane		Adjust sessions according the current definitions of the skeleton

11. Project

Project is a new feature of Event24x7 providing an easy graphical way to create and deploy a new structure of DESs and Sessions, deploy from a saved project file or save the current system configuration into project file.
A project file keeps all the DESs and session configurations, as well as all of the monitoring definitions. Using the graphical interface, it is possible to attach skeletons to each session. Once the project is deployed – each session will be created according to its skeletons.

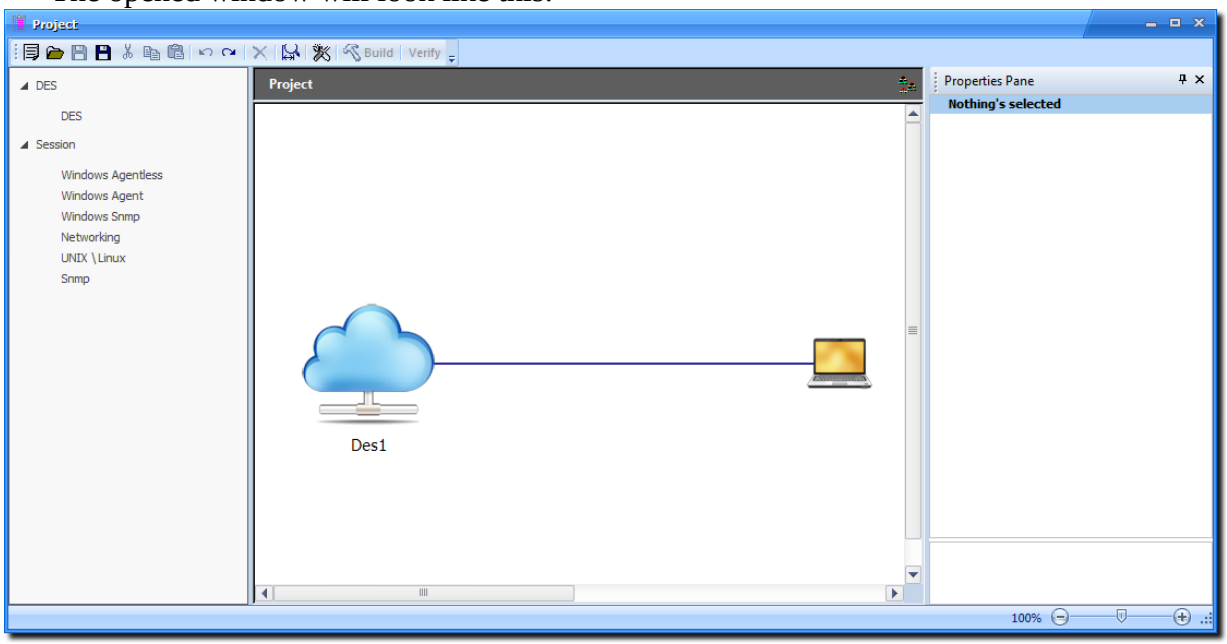


11.1 Getting Started

- Opening Project is done by selecting the Project Definition

from the Definitions menu.

- The opened window will look like this:



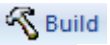
- The Project screen has three parts:

  - **Project Toolbox**
    The Toolbox is located at the left pane of the screen and displayed in a tree structure. It contains the list of all the predefined Project objects – DES and Sessions (Windows Agentless, Windows Agent, Windows Snmp, Networking, UNIX\Linux, Snmp).

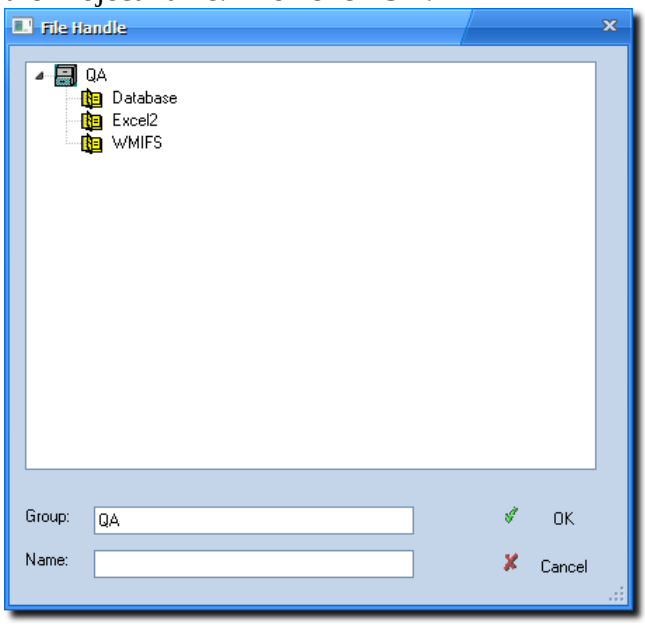
  - **Project Definition**
    The Project definition pane is at the center of the screen.
    In this section the Project structure is created.

  - **Project Properties**
    The Project properties pane is at the right of the screen.
    This section is used for providing the specific properties for each one of the Project objects.

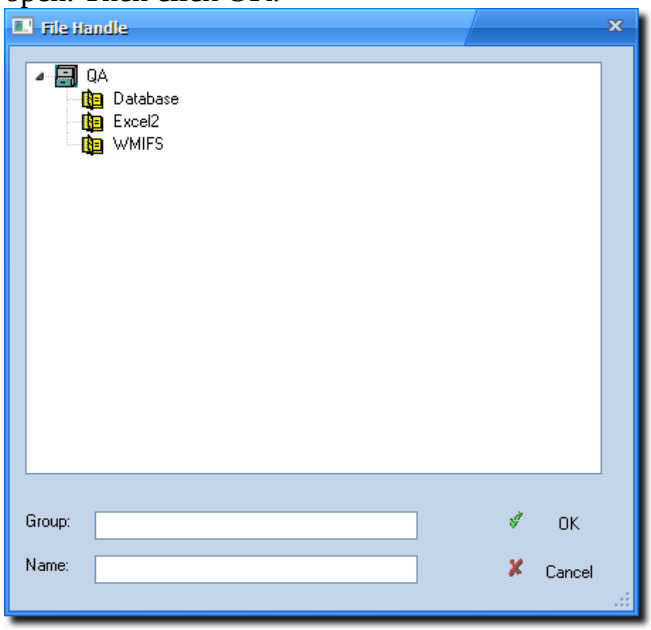
- **Project screen operation buttons**

New		Create a new project.
Open		Open an existing project.
Save		Save current project.
Save As		Save current project with different name.
Cut		Cut a single project object.
Copy		Copy a single project object.
Paste		Paste a project object.
Undo		Undo do last change.
Redo		Redo last change.
Delete		Delete selected object.
Fit to Window		Automatic fit project to screen.
Create from current		Create new project from current configuration.
Build		Deploy configuration from current project.
Verify		Not active in project definition.

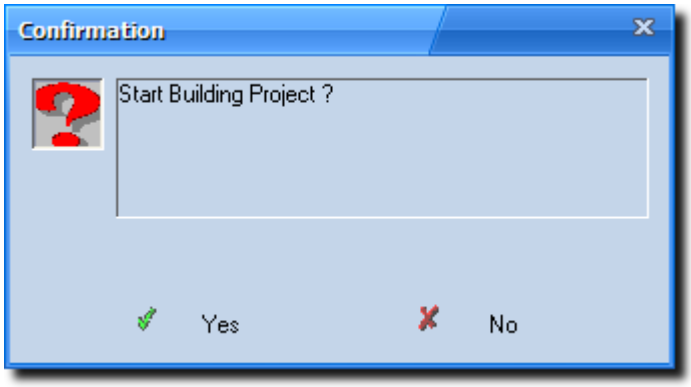
- **Save Project As**
  Click the Save As button from the operation buttons and select the Group name and the Project name. Then click OK.



- **Open Project**
  Click the Open button from the operation buttons and select the Project name to open. Then click OK.

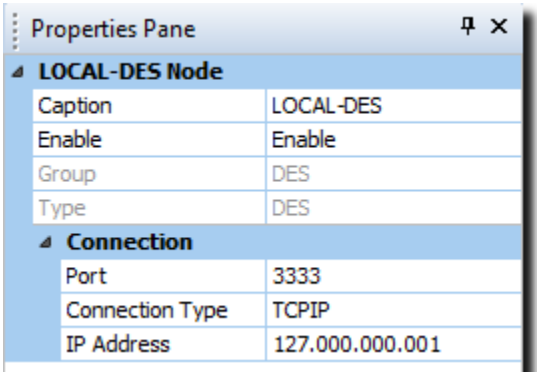


- **Build current Workflow**
  Click on the Build button from the operation buttons and then click on the Yes button to start the deployment of the current project.



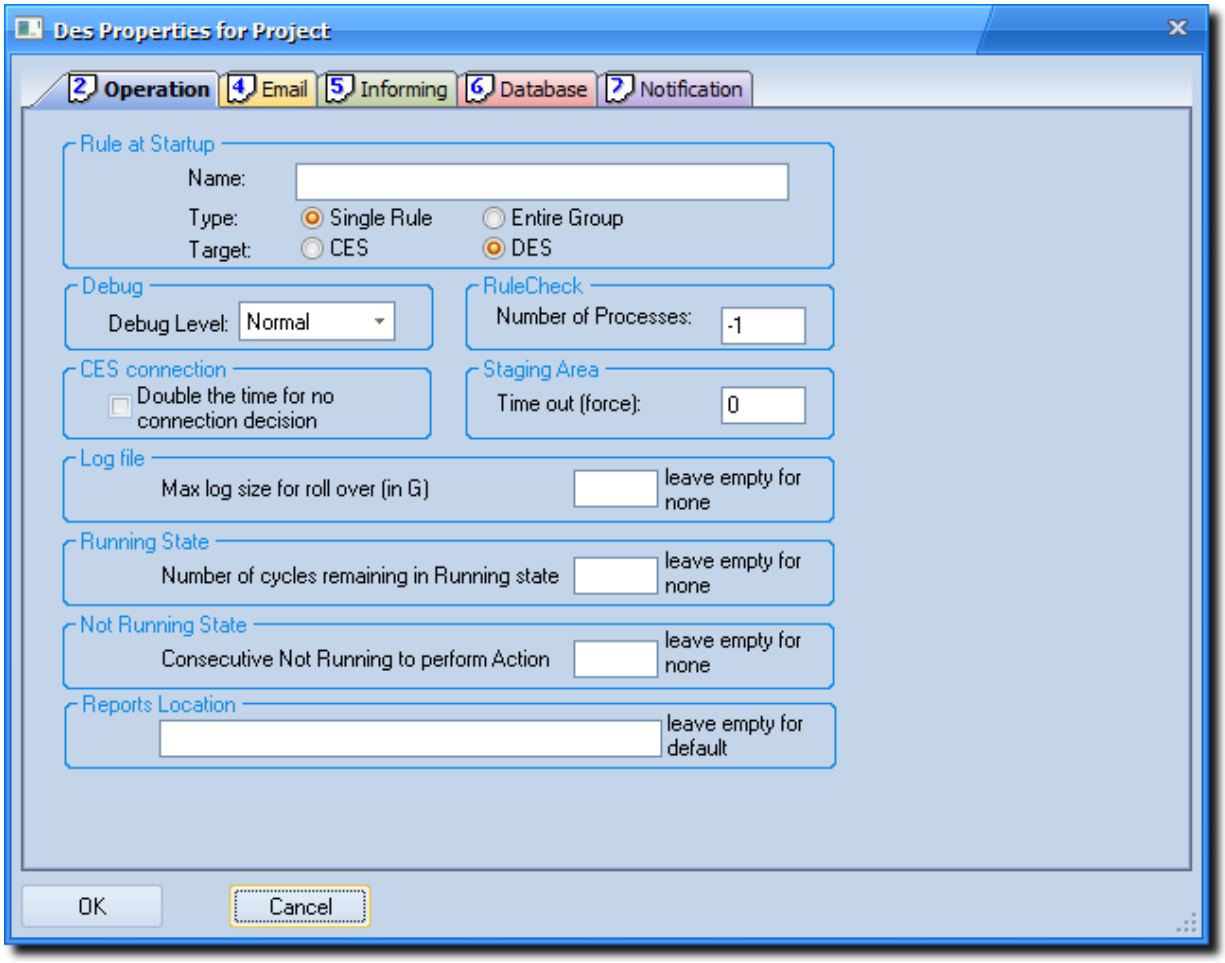
11.2 DES object

11.2.1 DES Properties Pane



Caption	DES's name.
Enable	DES's Status (Enable/Disable).
Group	Group name.
Type	Object type.
Port	Port number.
Connection Type	Connection Type. Available options: **TCPIP** **HostName**
IP Address	IP Address

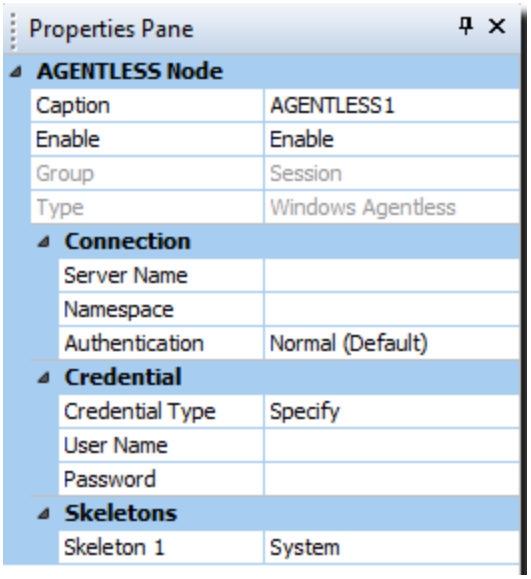
11.2.2 DES Properties for Project



Double click on a DES object will open the above dialog.
This dialog has some of the tabs from the DES configuration dialog.
When a project is deploying, the DES will get its configuration from this dialog.
The available tabs are: Operation, Email, Informing, Database and Notification.
See DES Configuration section for more details.

11.3 Session object

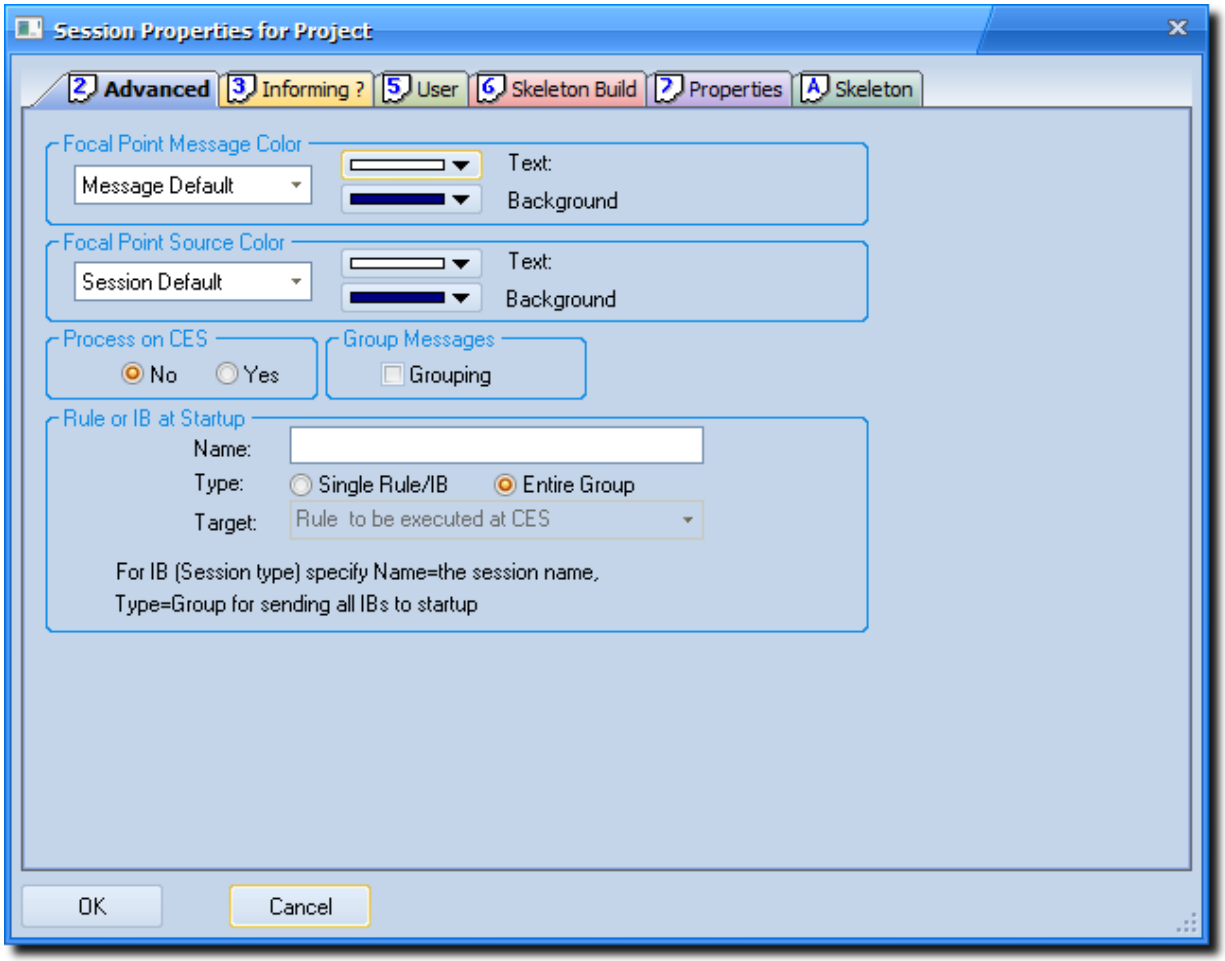
11.3.1 Session Properties Pane



Caption	Session's name.
Enable	Session's Status (Enable/Disable).
Group	Group name.
Type	Object type.
Server Name	Server name of the managed platform. If the platform resides on the local PC it must remain empty.
Namespace	WMI name space. The default is **root\cimv2**.
Authentication	Authentication level. Normal or High.
Credential Type	Credential method. Available: **Specify** **Use Credential**
User Name	User name.
Password	Password.

Credential	Credential from credential table.
Skeletons	Currently attached skeletons.

11.3.2 Session Properties for Project

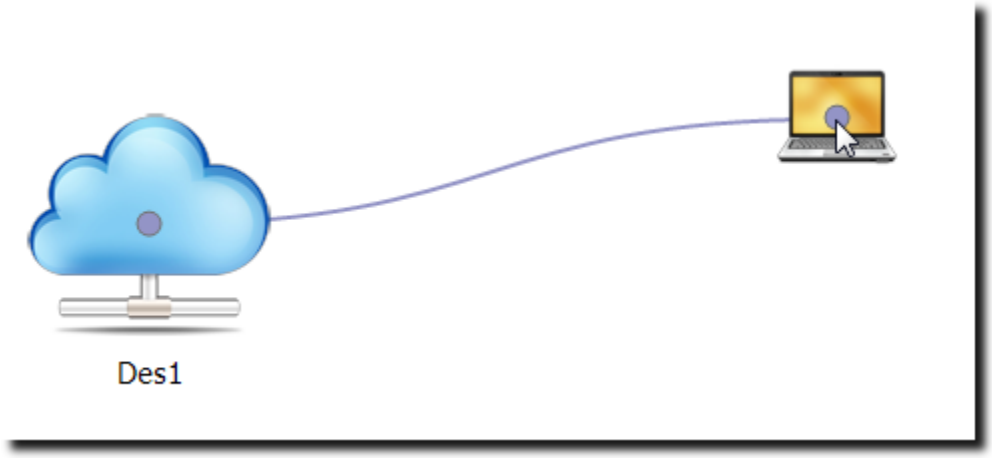


Double click on a Session object will open the above dialog.
This dialog has some of the tabs from the session configuration dialog.
When a project is deploying, the session will get its configuration from this dialog.
The available tabs are: Advanced, Informing, User, Skeleton Build, Properties and Skeleton.
See Session Configuration section for more details.

In the Skeleton tab it is possible to select multiple skeleton for each session, using the CTRL key + Mouse left button.

11.4 DES - Session Connection

In order to connect a DES to Session, select the DES and click the mouse left button on the center point and drag the connection to the Session's center point and release the mouse button.



12. User Experience

The User Experience engine is a new and powerful tool of user actions simulator.
It can be used to simulate and test any set of actions done by the user, such as opening a browser and accessing a web site or running a local application. The User Experience engine is scheduler based, just like a collector and it can run many tests one after the other.
This engine has a variety of options, from simulation of keyboard and mouse activities, through finding and clicking a specific control on the screen, searching text in the screen and measuring time of actions.

This new engine enables you to check web sites availability, run programs exactly as a user would have and simulate an entire set of actions completely automatically.
After each test, the results will be sent to the Event24x7 for evaluation. The results are caught by an interceptor, just like the results of a regular agent (RES). After getting the results, a parameter is used to decide whether the test ended successfully or whether there were problems along the way, and if so, which actions to perform (sending email, SMS, rerun the script for second test results, etc.). The parameter is identical to any other parameter used in the Proactive and Mange by Exception engines.

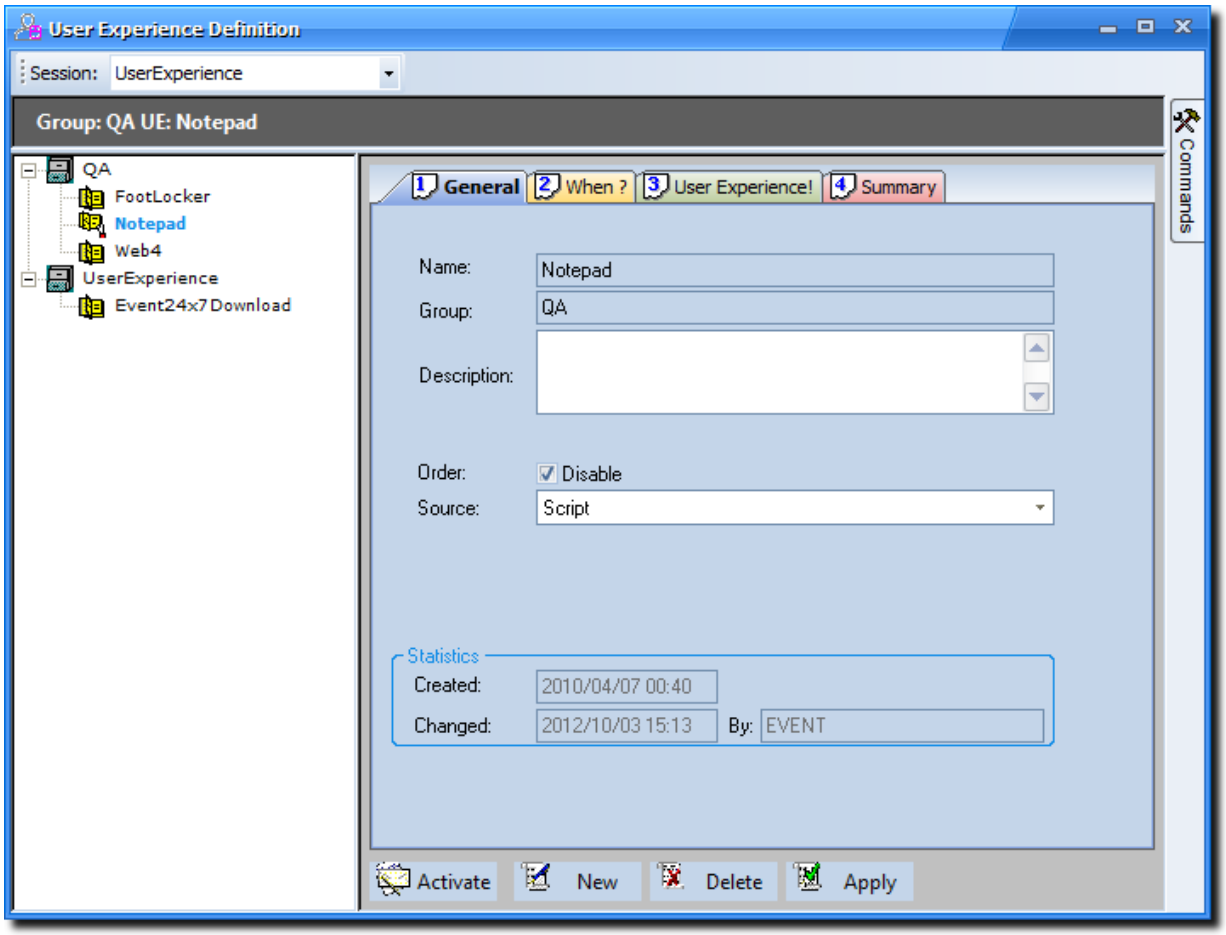
The set of actions for the User Experience engine is written in a simple script language called LUA script. To this script language we added some special commands for the special operations available. Any special command will begin with the word "automator".
The script can contain DES scope variables (user variables), which will be translated before each run of a script. This way it is possible to use the same script with different values.

12.1 User Experience Session Definition

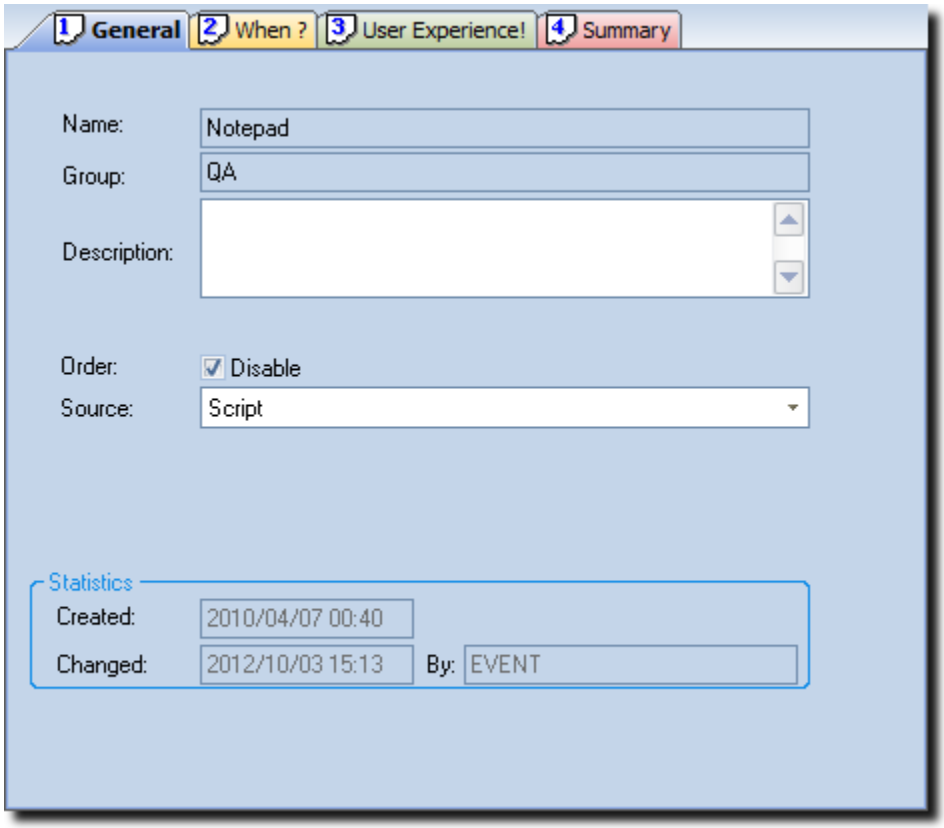
Define User Experience Session.

12.2 User Experience Definition

Define User Experience scenarios for execution.



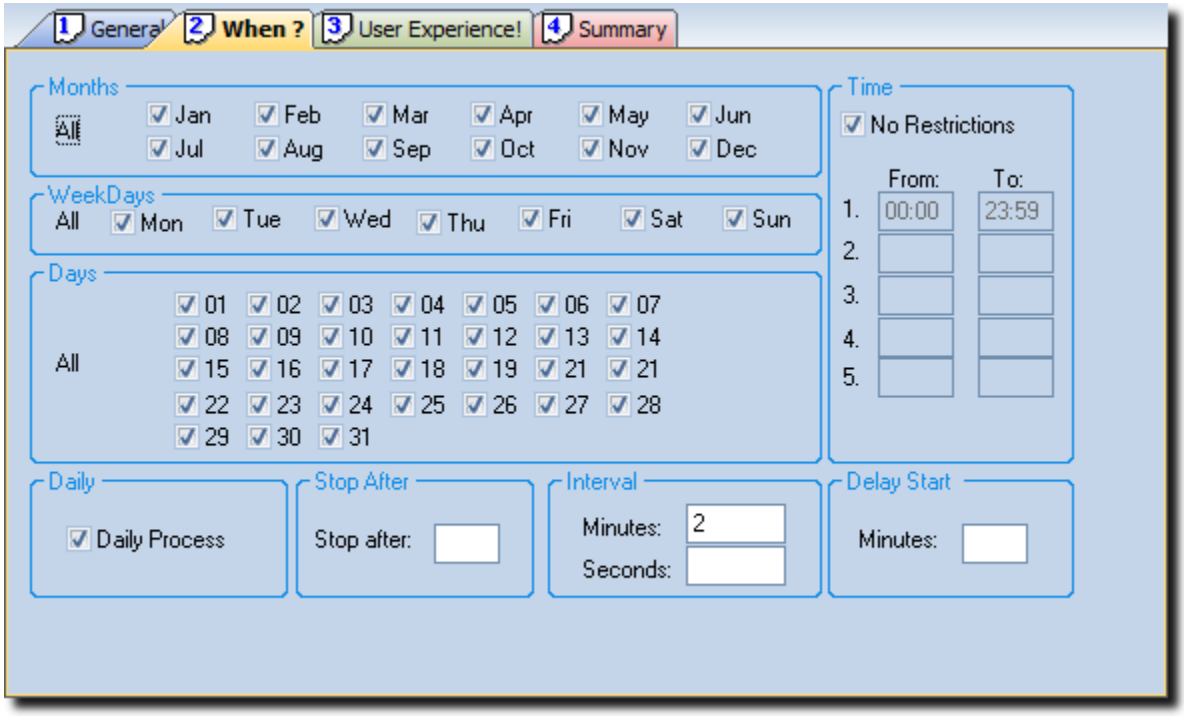
12.2.1 General Tab



Name	User Experience object's Name identifier.
Group	User Experience object's Group name identifier.
Description	Optional description of this User Experience object.
Don't order this element	Select this option if you want to disable this User Experience object.
Source	Script or Workflow

12.2.2 When? Tab

The When? tab defines the scheduling parameters for active rules. Still in order for a rule to become effective it needs to be activated first.



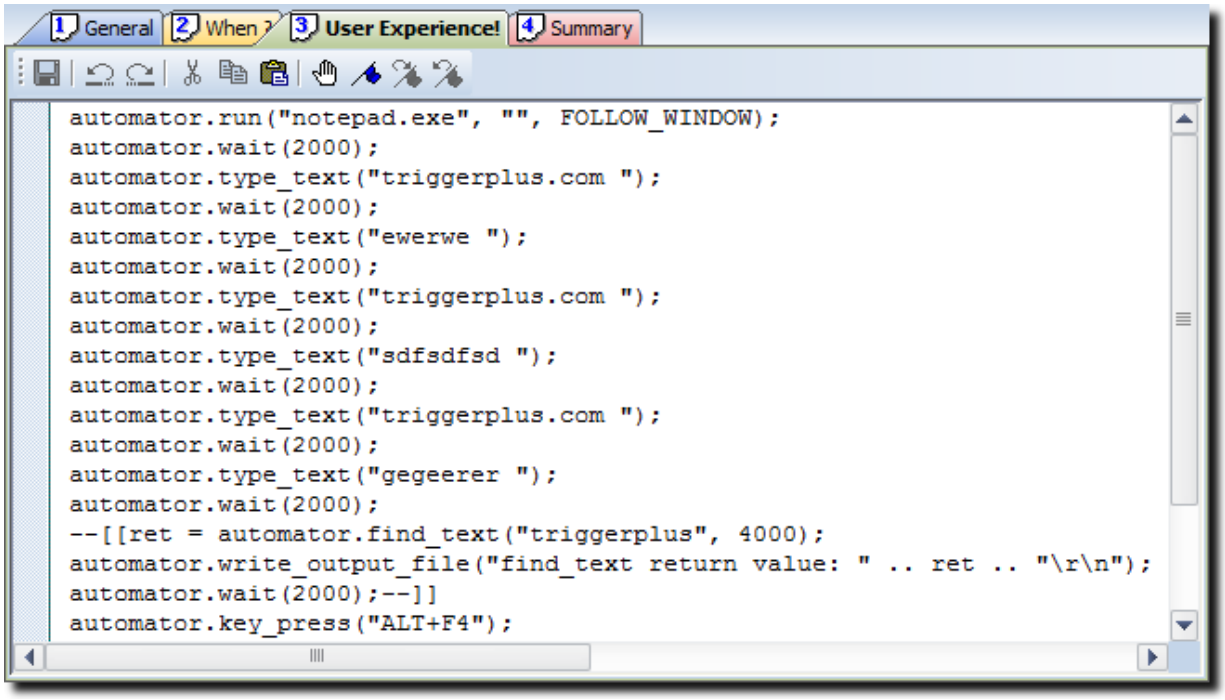
Select any of the following: months, week days, and days of month, interval and time frame.

Months	Specify months the rule will be active
Weekdays	Specify weekdays the rule will be active
Days	Specify days the rule will be active
From Time	Specify the beginning time from which the rule will be active.
To Time	Specify the end of the time frame during which the rule is active.
Daily Process	Specify whether the rule will be scheduled on a daily basis. If it is not checked, the rule will not be scheduled automatically on the next day.
Stop After	Stop rule after a number of executions.

Interval	For cyclic rule, specify the interval upon which the rule will be scheduled.

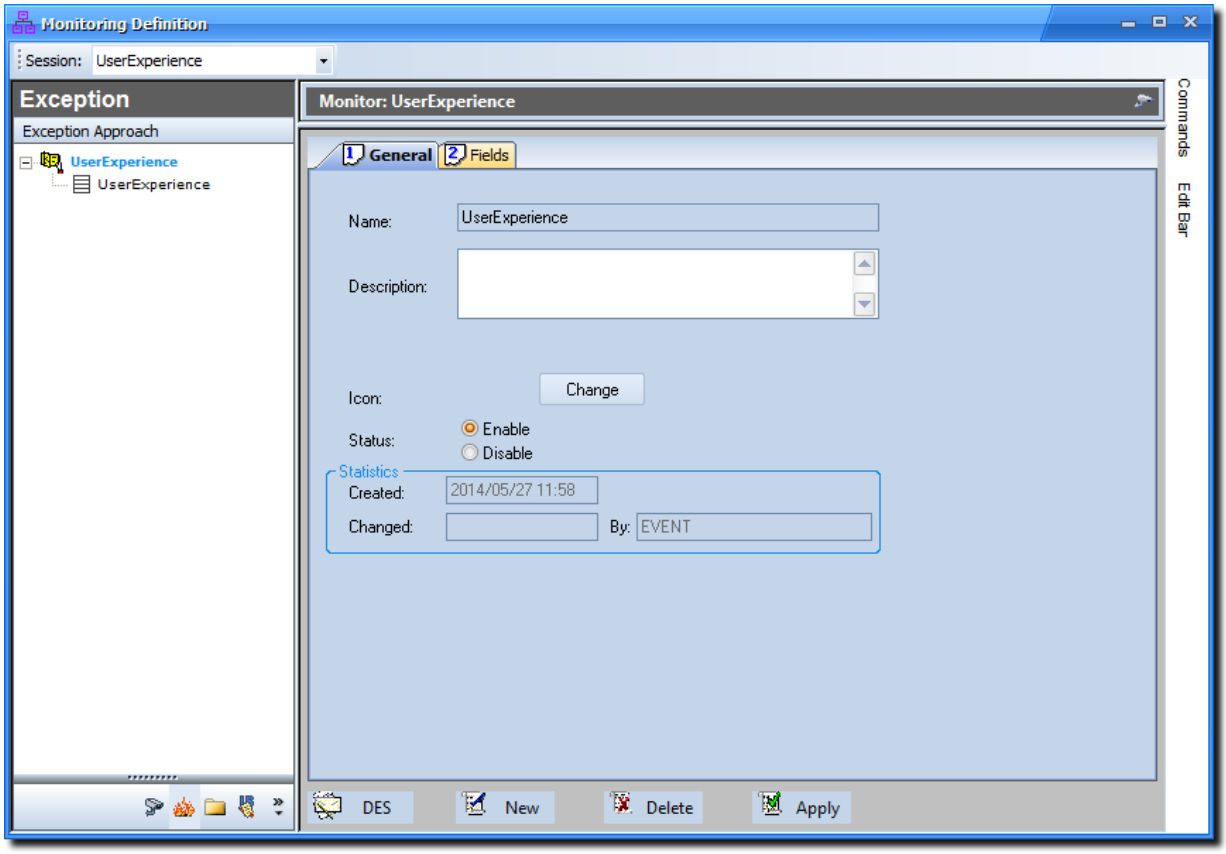
12.2.3 User Experience! Tab

The User Experience! tab is used to define the scenario to be simulated. It contains a LUA script commands that the Event24x7 translates into actions. The script can be written manually or can be copied and pasted from the Event24x7UserExperienceRecorder.



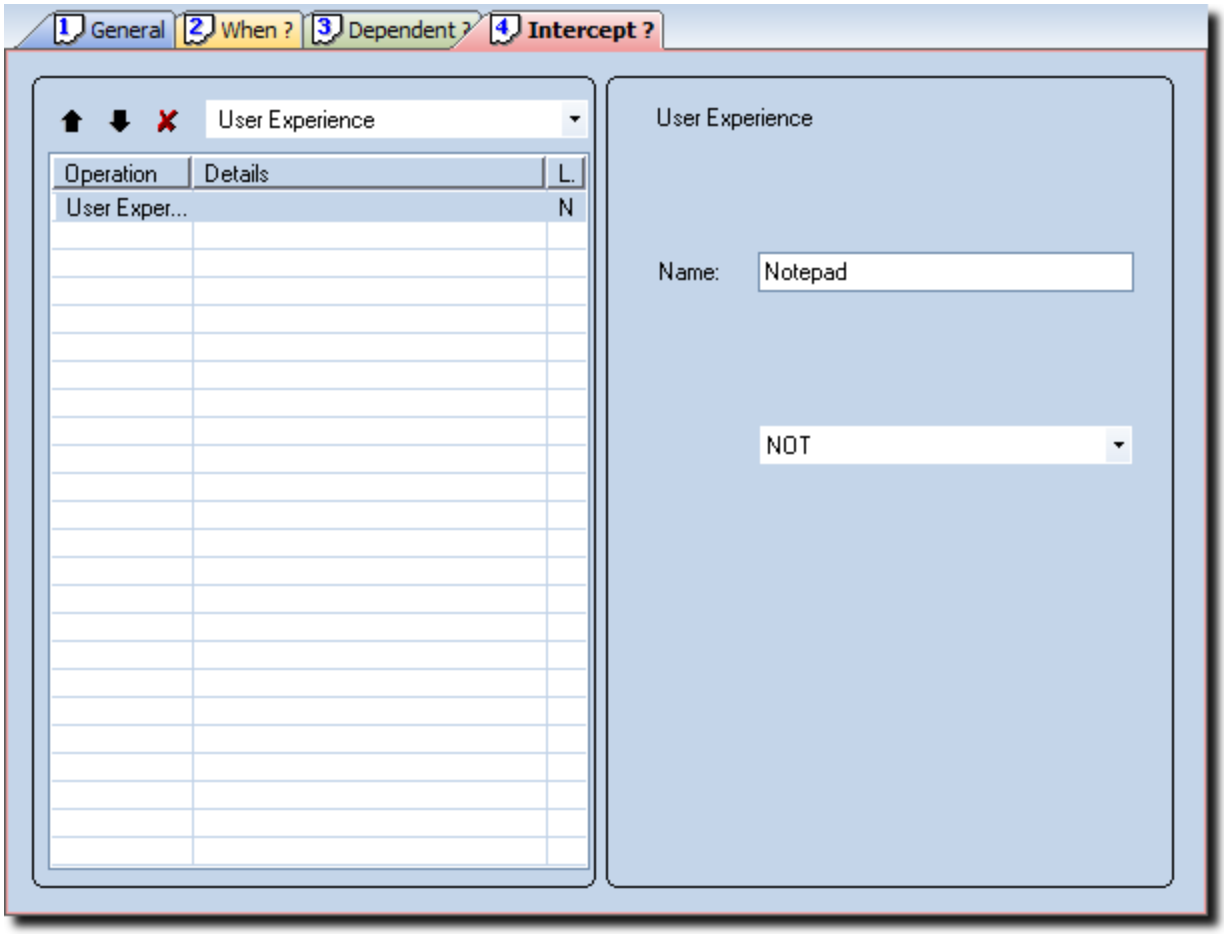
12.3 User Experience Interceptor

Define User Experience Output Interceptor



12.4 Intercept? Tab

The Intercept? tab is used to catch the output of the User Experience simulation.
All that is written to the output file using the command:
automator.write_output_file("text for output file");
will be caught by the interceptor and can be then parsed by the Event24x7 parameter.



Name Must be the same as the name of the User Experience Definition object.

12.5 User Experience Commands

The following list describes the commands that are available on the User Experience tool:

ClickControl **(**selector, lineNumber, numberOfClicks, clickButton**)**	Search and click on a control on the screen. **Selector** = the selected control attributes. If "fromfile" is written, then the selector will be taken from the ControlFile.txt file, from the line indicated by the lineNumber parameter. lineNumber = the line number in the ControlFile.txt file to take for a selector. In use only if selector parameter equals "fromfile". **numberOfClicks =** number of times to click ("single" or "double"). **clickButton** = which mouse button to click on ("left", "middle" or "right").
ClickOnText **(**findText, occurence, captMethod, numberOfClicks, clickButton, divx, divy**)**	Search and click on text on the screen. **findText** = text to find. **occurrence** = select which occurrence to click (starts from 0). **captMethod** = capture method ("Native" or "OCR"). **numberOfClicks =** number of times to click ("single" or "double"). **clickButton** = which mouse button to click on ("left", "middle" or "right"). **divx** = number of pixels to move horizontally. **divy** = number of pixels to move vertically.
find_text (TextToFind, Timeout**)**	Search for text on screen. Search will be executed for a given time.
getTextFromRect (int x, int y, int width, int height, String captMethod**)**	Get text from a rectangle on screen. Provide X, Y coordinates as well as width and height of the rectangle. You can choose the capture method from: **NATIVE** **FULL_TEXT** **OCR**
getTextFromActiveWindow **(**String captMethod)	Get text from active window. You can choose the capture method

	from: **NATIVE** **FULL_TEXT** **OCR**
get_timestamp()	Returns current timestamp.
key_press **(**Key**)**	Press on selected key. See next section for available keys.
MouseGoTo **(**X, Y**)**	Move the mouse to a new location, provide X coordinates and Y coordinates.
MouseLeftDown()	Mouse left button pressed down.
MouseLeftUp()	Mouse left button release.
MouseRightDown()	Mouse right button pressed down.
MouseRightUp()	Mouse right button release.
PrintScreen (filename)	Take a snapshot of the screen and save it into a file. **Filename** = the file name of the snapshot. (the **".png"** will be added automatically). In case of empty argument the file name will be equal to the script name with the addition of "**.png**".
quit()	End the User Experience simulator.
Run (File Name, Parameters, Method**)**	Run a program with parameters and method. Methods available: **FOLLOW_WINDOW** **FOLLOW_FOCUS**
type_text **(**Text**)**	Type the selected text.
Wait **(**Timeout**)**	Wait for a number of milliseconds.
write_output_file **(**Text**)**	Write text to output file.

12.6 Available keys

The following keys are available for the "key_press" command as a parameter:
For example: automator.key_press("ALT+D");
automator.key_press("ENTER");

Parameter	Key
BACKSPACE, BS, BKSP	BACKSPACE
TAB	TAB
CLEAR	CLEAR
ENTER	ENTER
SHIFT	SHIFT
CTRL	CONTROL
ALT	ALT
PAUSE	PAUSE
CAPSLOCK	CAPSLOCK
ESC	ESCAPE
SPACE	SPACE
PGUP	PAGE UP
PGDOWN	PAGE DOWN
END	END
HOME	HOME
LEFT	LEFT
UP	UP
RIGHT	RIGHT
DOWN	DOWN
SELECT	SELECT
PRINT	PRINT
EXECUTE	EXECUTE
PRTSC	SNAPSHOT
INS	INSERT
DEL	DELETE
HELP	HELP
0,1,2,3,4,5,6,7,8,9	0,1,2,3,4,5,6,7,8,9
A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P, Q,R,S,T,U,V,W,X,Y,Z	A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P, Q,R,S,T,U,V,W,X,Y,Z

LWIN	LEFT WINDOWS BUTTON
RWIN	RIGHT WINDOWS BUTTON
APPS	APPS
SLEEP	SLEEP
NUMPAD0	NUMPAD0
NUMPAD1	NUMPAD1
NUMPAD2	NUMPAD2
NUMPAD3	NUMPAD3
NUMPAD4	NUMPAD4
NUMPAD5	NUMPAD5
NUMPAD6	NUMPAD6
NUMPAD7	NUMPAD7
NUMPAD8	NUMPAD8
NUMPAD9	NUMPAD9
MULTIPLY	MULTIPLY
ADD	ADD
SEPARATOR	SEPARATOR
SUBTRACT	SUBTRACT
DECIMAL	DECIMAL
DIVIDE	DIVIDE
F1	F1
F2	F2
F3	F3
F4	F4
F5	F5
F6	F6
F7	F7
F8	F8
F9	F9
F10	F10
F11	F11
F12	F12
F13	F13
F14	F14
F15	F15
F16	F16
F17	F17
F18	F18
F19	F19
F20	F20
F21	F21
F22	F22
F23	F23
F24	F24
NUMLOCK	NUMLOCK
SCROLLLOCK	SCROLLLOCK

BRSBACK	BROWSER BACK
BRSFORWARD	BROWSER FORWARD
BRSREFRESH	BROWSER REFRESH
BRSSEARCH	BROWSER SEARCH
BRSHOME	BROWSER HOME
VOLMUTE	VOLUME MUTE
VOLDOWN	VOLUME DOWN
VOLUP	VOLUME UP
MEDIA_NEXT_TRACK	MEDIA NEXT TRACK
MEDIA_PREV_TRACK	MEDIA PREVIOUS TRACK
MEDIA_STOP	MEDIA STOP
MEDIA_PLAY_PAUSE	MEDIA PLAY/PAUSE
LAUNCH_MAIL	LAUNCH MAIL
LAUNCH_MEDIA_SELECT	LAUNCH MEDIA SELECT
LAUNCH_APP1	LAUNCH APP1
LAUNCH_APP2	LAUNCH APP2
COLON	COLON
PLUS	PLUS
COMMA	COMMA
MINUS	MINUS
PERIOD	PERIOD
QUESTION	QUESTION
TILDA	TILDA
LEFT_BRACKET	LEFT_BRACKET
PIPE	PIPE
RIGHT_BRACKET	RIGHT_BRACKET
QUOTE	QUOTE

12.7 Script Example

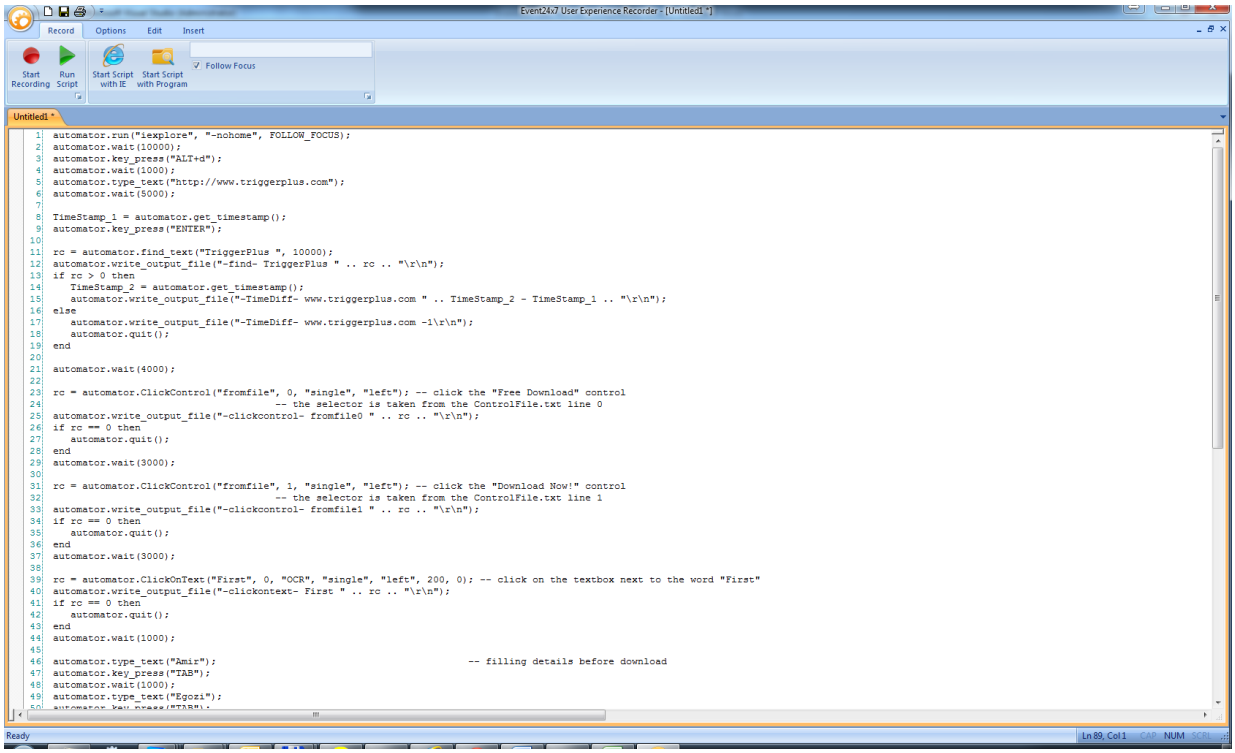
The following is a script example for launching an internet explorer, connecting to triggerplus.com site and measuring how time it took for the triggerplus webpage to appear, by searching for the word "TriggerPlus" in the page, with a 10 seconds timeout. If no such word is found after 10 seconds, the script will be stopped.
If the page has loaded, the "Free Download" menu control and the "Download Now" button will be clicked and the user details will be entered before getting to the download links page. Once there, the "Download Event24x7 Trial Version" will be clicked as well as the "Save" button in the popup window. The script will stay in wait state a few seconds and then it will be closed.

```
automator.run("iexplore", "-nohome", FOLLOW_FOCUS);
automator.wait(10000);
automator.key_press("ALT+d");
automator.wait(1000);
automator.type_text("http://www.triggerplus.com");
automator.wait(5000);

TimeStamp_1 = automator.get_timestamp();
automator.key_press("ENTER");

rc = automator.find_text("TriggerPlus ", 10000);
automator.write_output_file("-find- TriggerPlus " .. rc .. "\r\n");
if rc > 0 then
  TimeStamp_2 = automator.get_timestamp();
  automator.write_output_file("-TimeDiff- www.triggerplus.com " .. TimeStamp_2 - TimeStamp_1 .. "\r\n");
else
  automator.write_output_file("-TimeDiff- www.triggerplus.com -1\r\n");
  automator.quit();
end

automator.wait(4000);

rc = automator.ClickControl("fromfile", 0, "single", "left"); -- click the "Free Download" control
                        -- the selector is taken from the ControlFile.txt line 0
automator.write_output_file("-clickcontrol- fromfile0 " .. rc .. "\r\n");
if rc == 0 then
  automator.quit();
end
automator.wait(3000);

rc = automator.ClickControl("fromfile", 1, "single", "left"); -- click the "Download Now!" control
                        -- the selector is taken from the ControlFile.txt line 1
automator.write_output_file("-clickcontrol- fromfile1 " .. rc .. "\r\n");
if rc == 0 then
  automator.quit();
end
automator.wait(3000);

rc = automator.ClickOnText("First", 0, "OCR", "single", "left", 200, 0); -- click on the textbox next to the word
"First"
automator.write_output_file("-clickontext- First " .. rc .. "\r\n");
if rc == 0 then
  automator.quit();
end
automator.wait(1000);

automator.type_text("Amir");                          -- filling details before download
automator.key_press("TAB");
automator.wait(1000);
automator.type_text("Egozi");
automator.key_press("TAB");
automator.wait(1000);
automator.type_text("amire@triggerplus.com");
automator.key_press("TAB");
automator.wait(1000);
automator.type_text("TriggerPlus");
```

```
automator.key_press("TAB");
automator.wait(1000);
automator.type_text("Support");
automator.key_press("TAB");
automator.wait(1000);
automator.type_text("is");
automator.key_press("TAB");
automator.wait(1000);
automator.type_text("Raanana");
automator.key_press("TAB");
automator.wait(1000);
automator.type_text("972774900511");

automator.key_press("TAB");
automator.wait(1000);
automator.key_press("ENTER");
automator.wait(3000);

rc = automator.ClickOnText("Version", 0, "OCR", "single", "left", 0, 0); -- click on the word "Version"
automator.write_output_file("-clickontext- Version " .. rc .. "\r\n");
if rc == 0 then
  automator.quit();
end
automator.wait(5000);

rc = automator.ClickOnText("Save", 0, "OCR", "single", "left", 0, 0); -- click on the word "Save"
automator.write_output_file("-clickontext- Save " .. rc .. "\r\n");
if rc == 0 then
  automator.quit();
end

automator.wait(20000);
automator.quit();                    -- end the script
```

12.8 Event24x7 User Experience Recorder

The Event24x7UserExperienceRecorder tool allows you to record a series of actions done by a user, in order to simulate them later by the Event24x7 system.

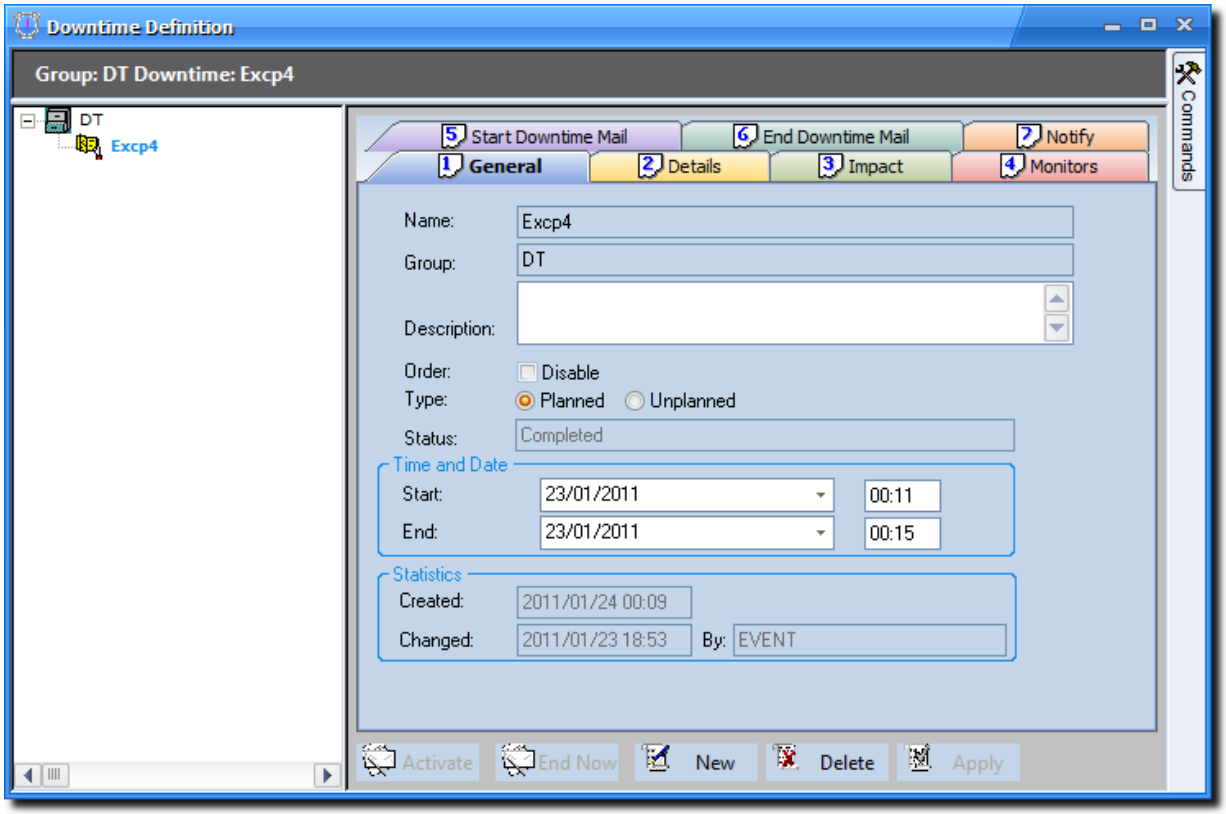


Press the "Start Recording" button, and do all the actions you wish to record. When done, press on the "Stop Recording" button in the toolbar on your screen.
After a few seconds you will get the output of the recording - a script containing all of the actions you made. You can add or change actions and modify the script as you please, using LUA script language and the special commands listed in section '11.5'.
Copy the script and paste into the Event24x7 User Experience Definition window, inside the User Experience! tab, select schedule for rerunning the script and press the "Activate" button for the Event24x7 User Experience engine to start the simulation.

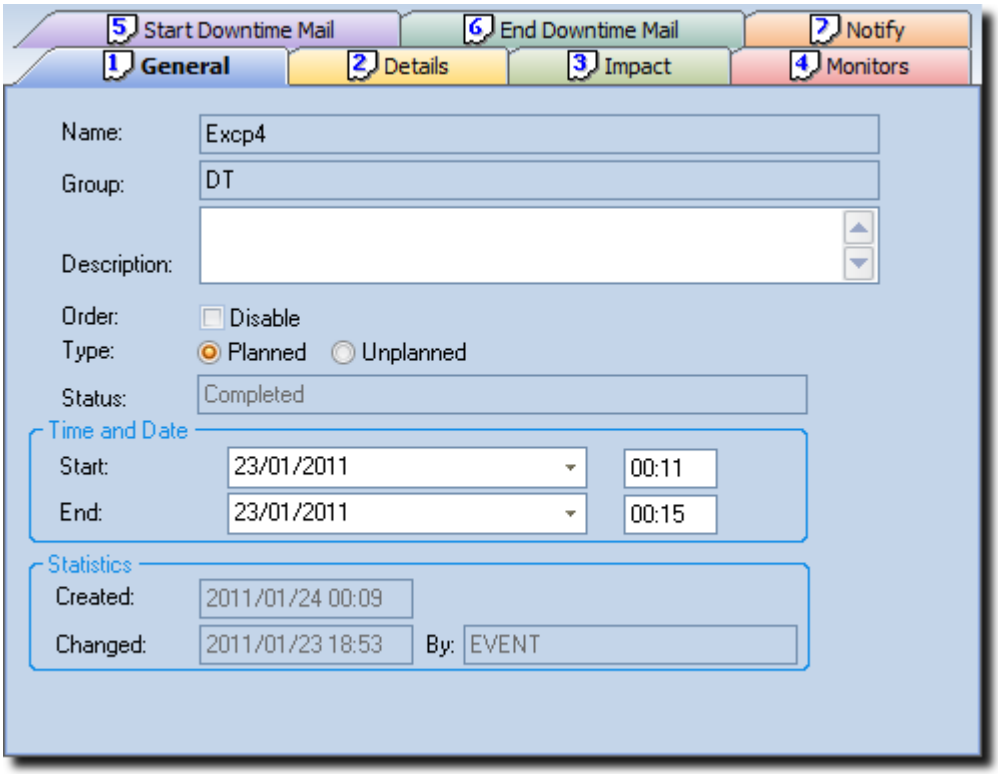
13. Downtime

Define Downtime for Sessions and Monitors for a period of time, on which no collector will be active and no parameter will be performed.

The Downtime operation allows you to set in advance, the date and time on which all monitoring for a specific session of even a specific monitor of a session will be disabled for a period of time. It allows you to select the sessions and monitors that will be included in this downtime. It can also send an automatic email on the start and end of downtime, as well as an email for notification.



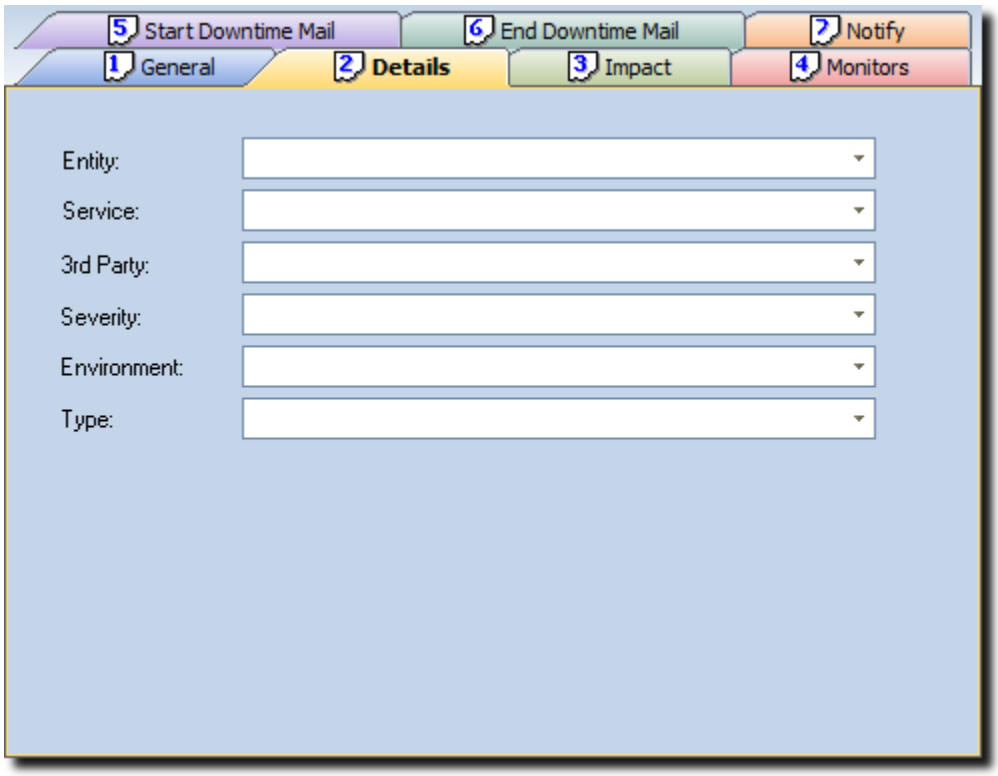
13.1 General Tab



Name	Downtime unique identifier.	
Group	Group name of Downtimes.	
Description	Downtime description.	
Order	If checked - disable this Downtime.	
Type	Select if Downtime is planned or unplanned.	
Status	Automatic status of Downtime field.	
Time and Date	**Start**	Starting date and time of the Downtime.

End	Ending date and time of the Downtime.

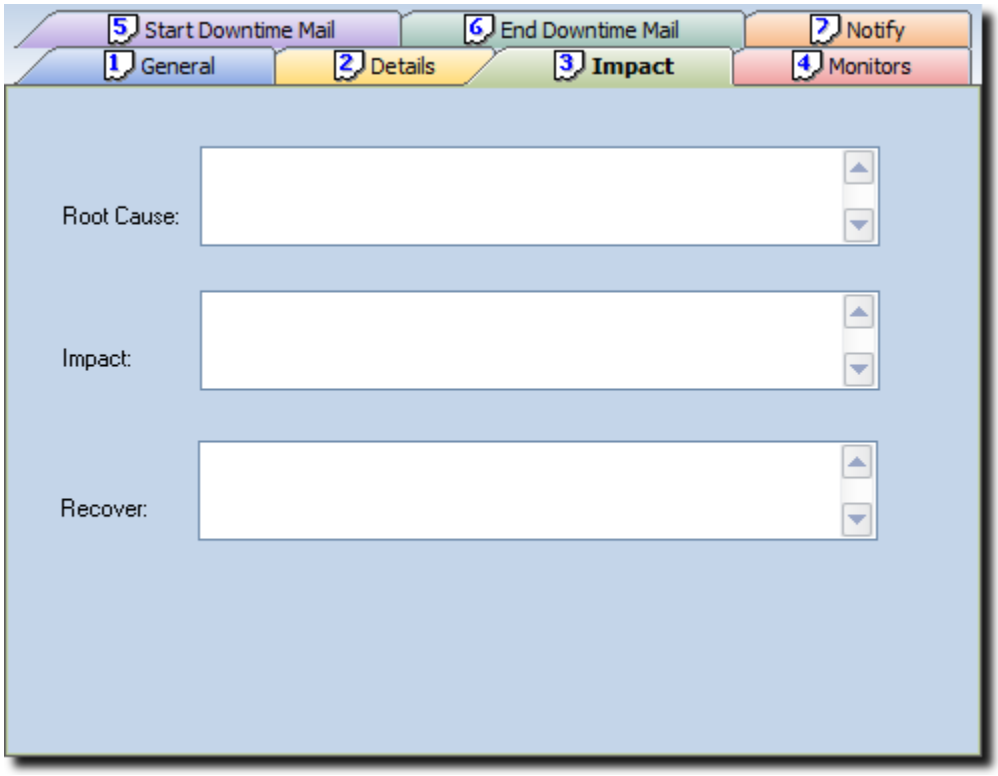
13.2 Details *Tab*



All combo boxes on the Detail tab are taken from outside tables

Entity	Entries taken from the Entity.tbl file.
Service	Entries taken from the Service.tbl file.
3rd Party	Entries taken from the 3rdParty.tbl file.
Severity	Entries taken from the Severity.tbl file.
Environment	Entries taken from the Environment.tbl file.
Type	Entries taken from the Type.tbl file.

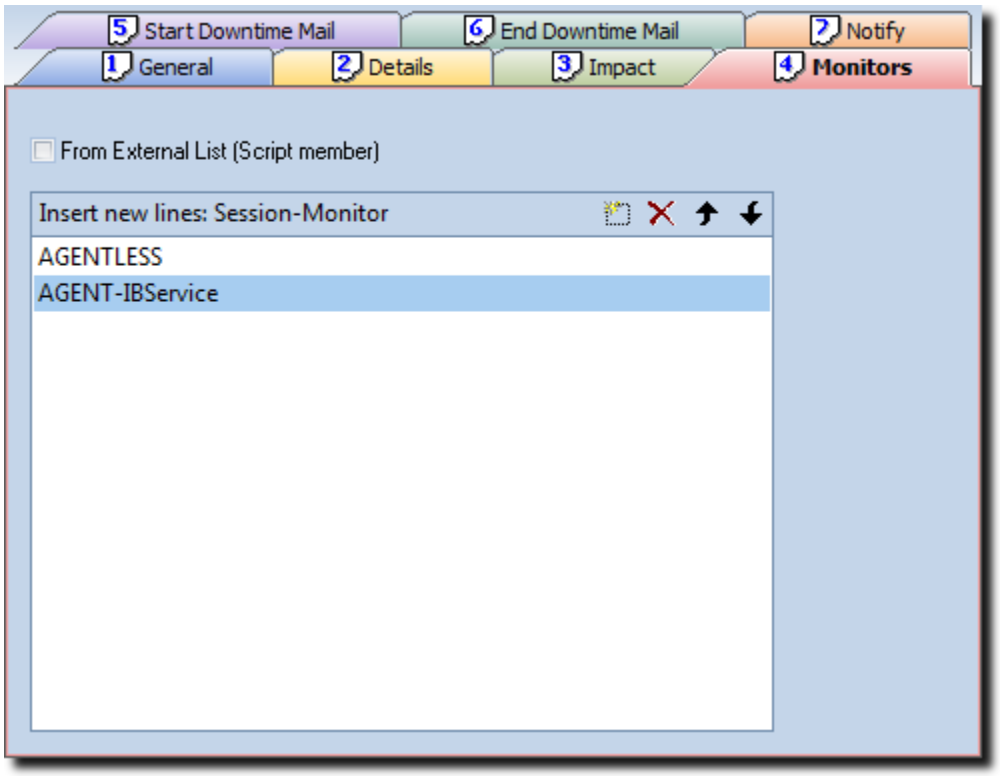
13.3 Impact Tab



All fields on the Impact tab are for free text entering.

Root Cause	Free text
Impact	Free text
Recover	Free text

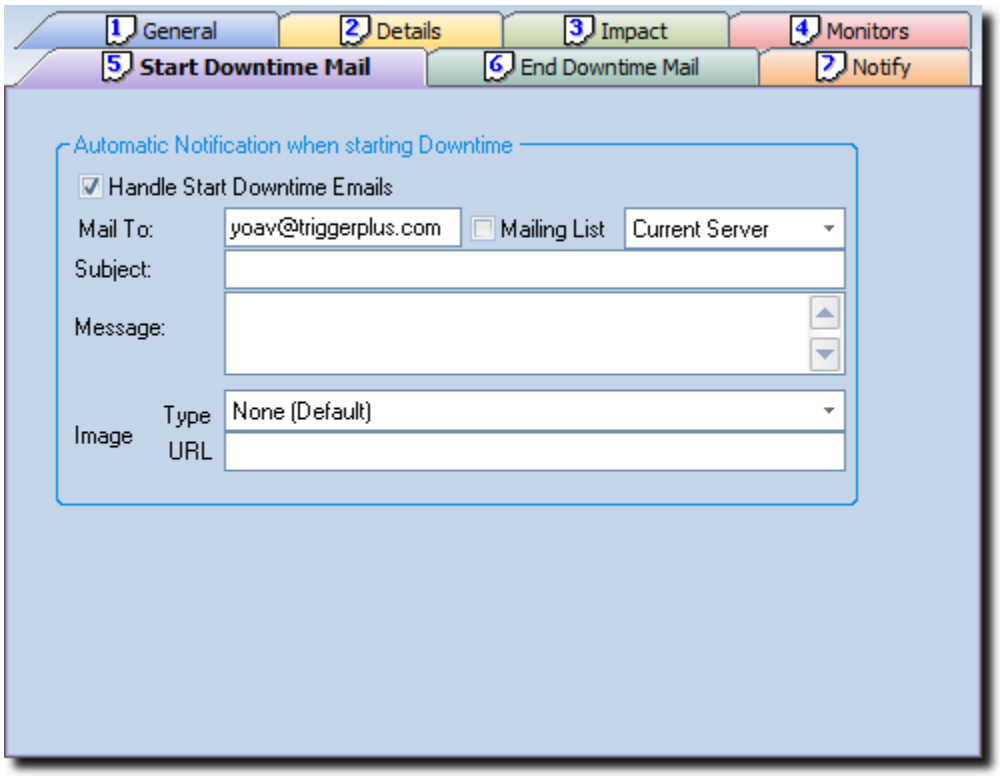
13.4 Monitors Tab



Selecting the Sessions and Monitors to be included in this Downtime

From External List	If checked – takes the Sessions and Monitors list from external file
Session-Monitor List	A list of all the Sessions and Monitors to be included in this Downtime

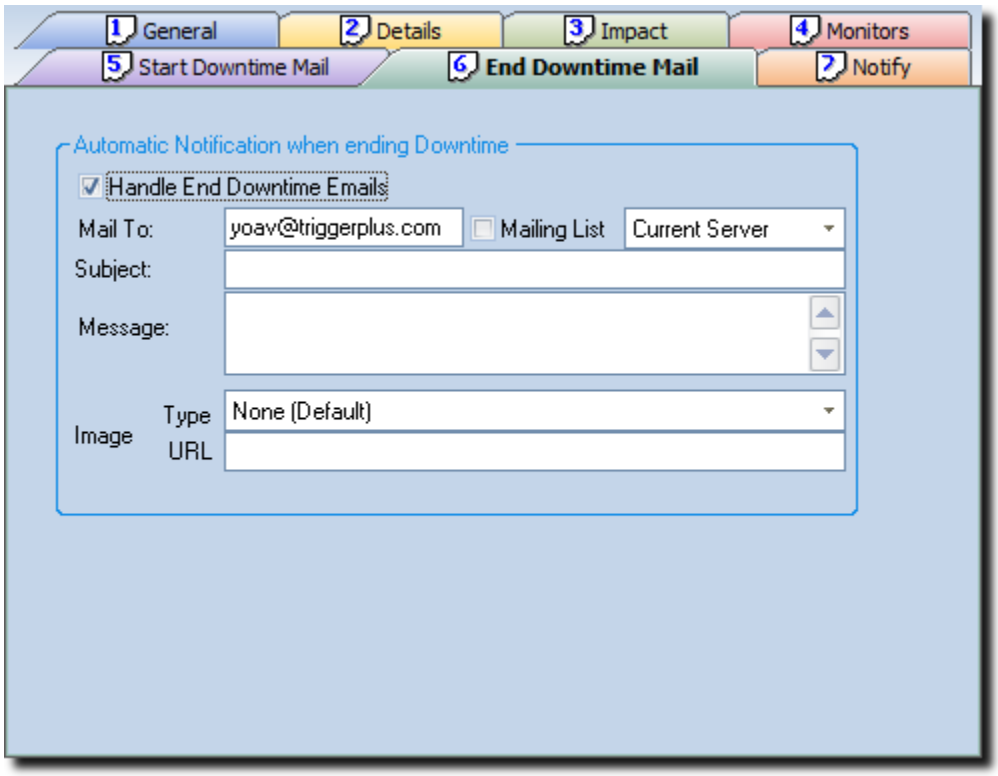
13.5 Start Downtime Mail Tab



Enabling the Automatic Start Downtime Mail sending.

Handle Start Downtime Emails	Set this field to activate the Automatic Start Downtime Mail sending.
Mail To	Set the mail recipient
Mailing List	Set this field to send the mail to a mailing list. In this case the **Mail To field** points to a Mailing List that is defined at the Script definition
Subject	The text that will be added to the subject of the message
Message	The text that will be added to the body of the message
Server	Select server for the mail to be sent from

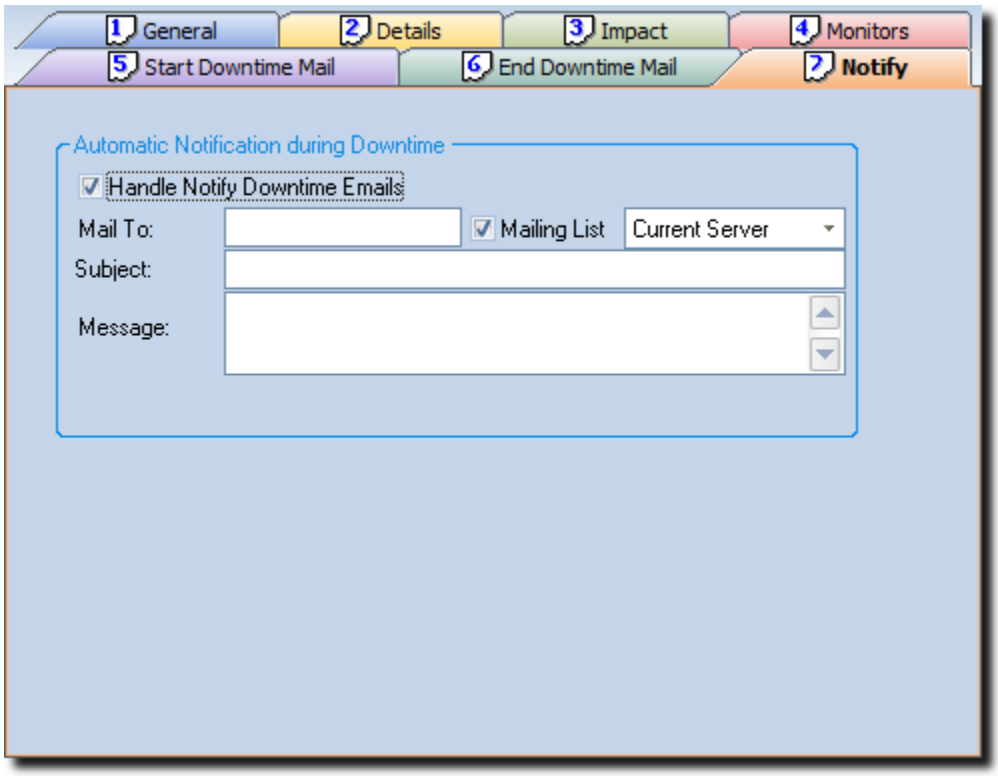
13.6 End Downtime Mail Tab



Enabling the Automatic End Downtime Mail sending

Handle End Downtime Emails	Set this field to activate the Automatic End Downtime Mail sending.
Mail To	Set the mail recipient
Mailing List	Set this field to send the mail to a mailing list. In this case the **Mail To field** points to a Mailing List that is defined at the Script definition
Subject	The text that will be added to the subject of the message
Message	The text that will be added to the body of the message
Server	Select server for the mail to be sent from

13.7 Notify Tab

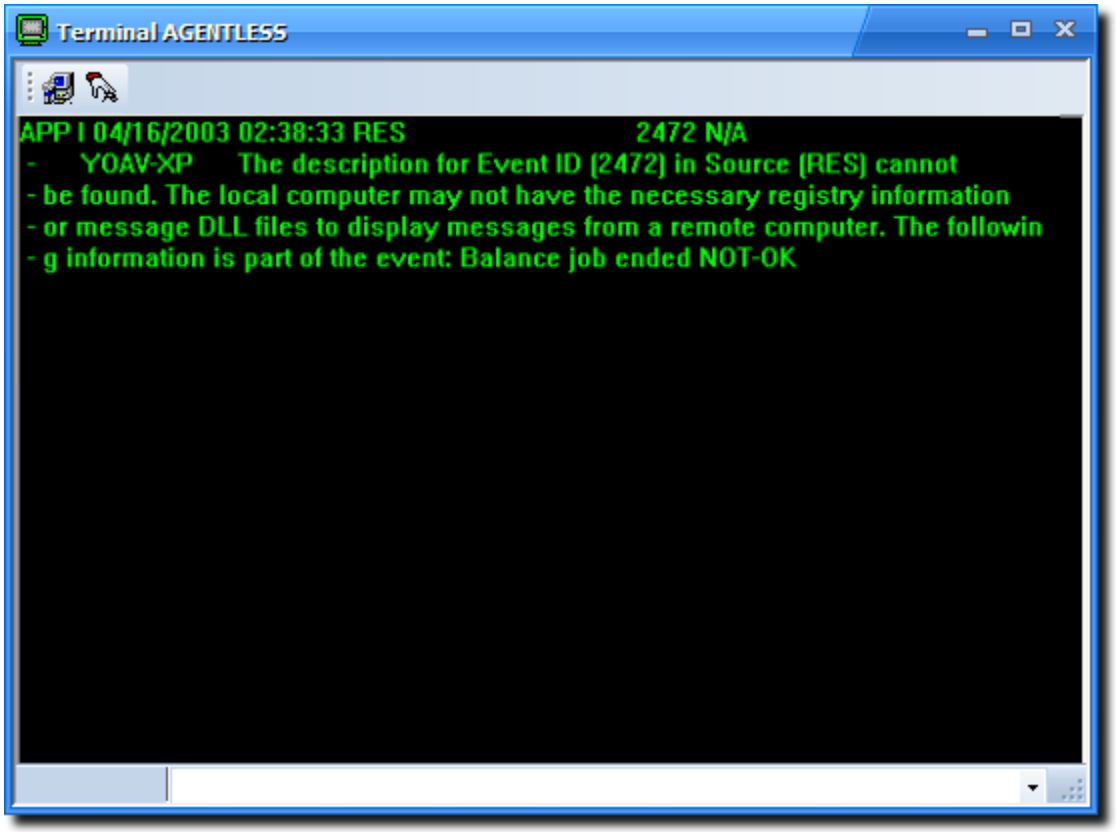


Enabling the Automatic Notification during Downtime

Handle Notify Downtime Emails	Set this field to activate the Automatic Notification during Downtime.
Mail To	Set the mail recipient
Mailing List	Set this field to send the mail to a mailing list. In this case the **Mail To field** points to a Mailing List that is defined at the Script definition
Subject	The text that will be added to the subject of the message
Message	The text that will be added to the body of the message
Server	Select server for the mail to be sent from

14. Terminals

The Terminal facility is a real console for each active session. When choosing the Terminal option from the Event24x7 Main Menu you get a list of the available consoles.


Terminal AGENTLESS
APP I 04/16/2003 02:38:33 RES 2472 N/A
- YOAV-XP The description for Event ID (2472) in Source (RES) cannot
- be found. The local computer may not have the necessary registry information
- or message DLL files to display messages from a remote computer. The followin
- g information is part of the event: Balance job ended NOT-OK

The terminal shows the incoming messages from the monitored session and lets the user send commands to the session. Sending commands is done by typing in the "Command:" line at the bottom of the screen, then pressing Enter.
For example, send "DIR c:" command to a Windows RES (smart agent) by typing the following command:

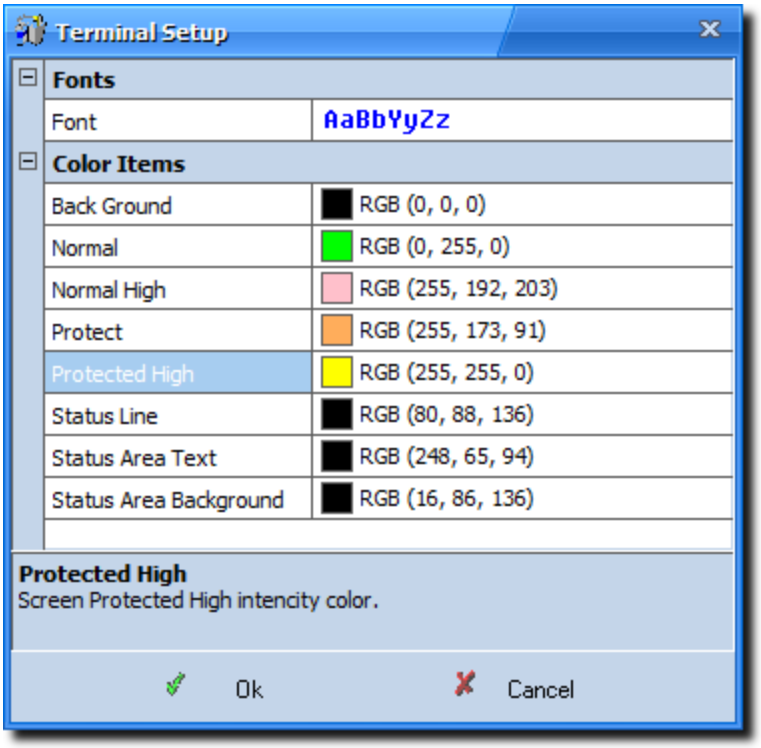
cmd.exe /c dir c:

The answer will be displayed back on the terminal.
Long lines that exceed the display width are rolled automatically into multiple lines in order not to lose information.

14.1 Toolbar

Setup		Open the Terminal Setup screen.
Command		Toggle Command line

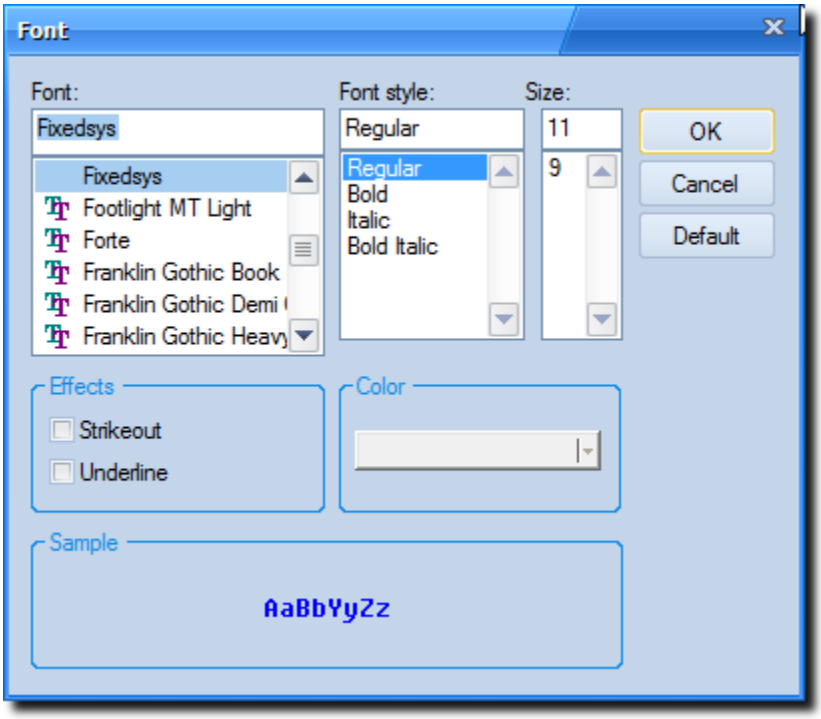
14.2 Terminal Setup



The terminal setup lets you adjust the font and the background color of the terminal.

14.3 Changing Font

Choosing the font causes the Font dialog to open:



14.4 Changing Color Items

The Terminal display has two sections. At the top, you see the incoming messages. Some consoles like MVS and AS400 have also a status section at the bottom of the screen. In this area the remote system displays information regarding the system. The setup terminal screen let you determine every one of the terminal color components. Adjust the looks of the terminal according to your preferences.

15. Control Center

The Control Center is a set of tools that help the operator or administrator to handle its environments. It allows ad hoc activities to manage the network components.

The group contains the following tools:

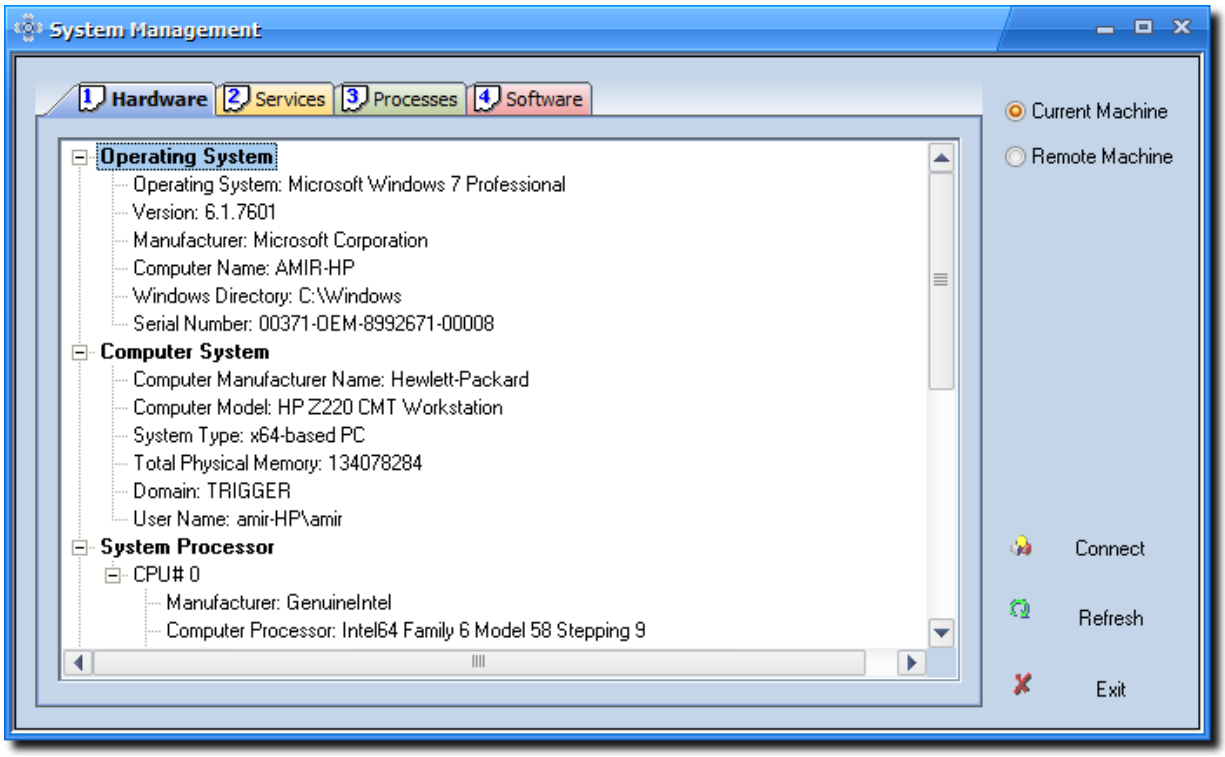
- System Management
- Database Management
- SNMP Management
- FileWatch Control

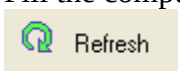
System Management and Database Management bring a different approach to the EventStudio. Usually EventStudio displays results of actions that were performed at the monitored computers. System Management and Database Management tools perform the action by themselves on the EventStudio computer.

15.1 System Management

When starting System Management, the following screen will be displayed:
System Management performs ad hoc actions to services and processes of a computer. It also provides an inventory list of the installed software.

When starting the System Management, it begins with the local computer where the EventStudio is running. To manage other computers, select the Remote Machine radiobutton and as a result, the following fields will be displayed:



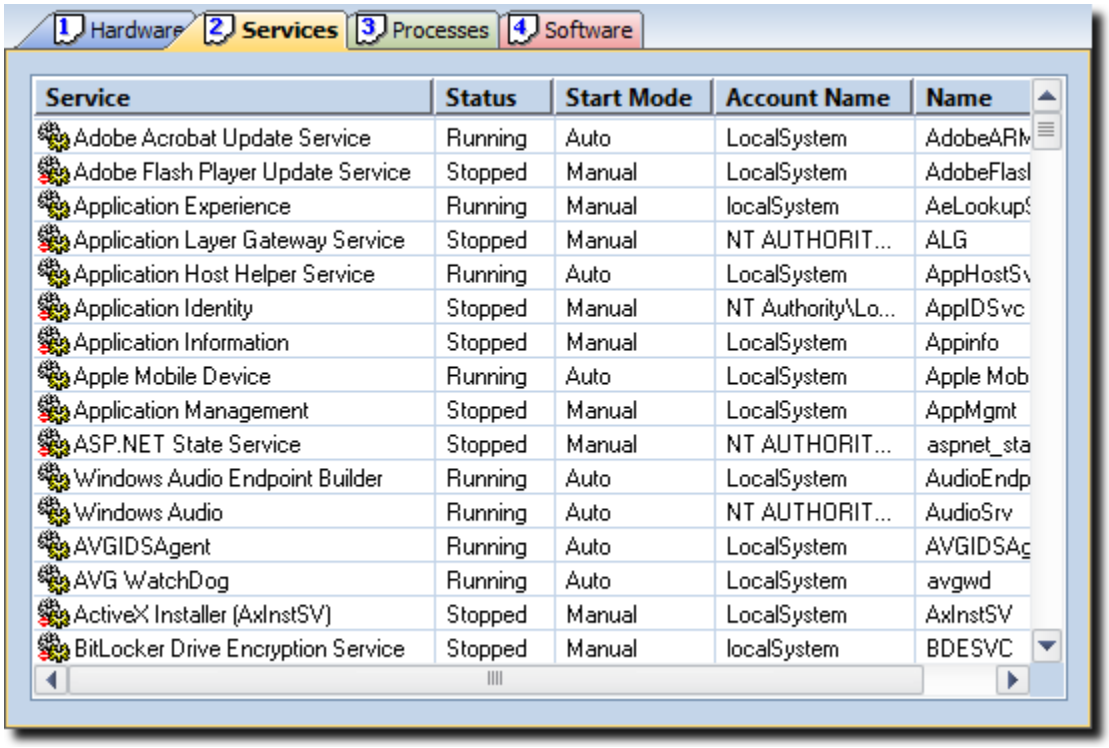
Fill the computer address you want to manage, User ID and password and type the 

button.

The Hardware tab shows the hardware components of the tested computer.
It also shows information about the Processor, BIOS, Memory, Disk Drives and the Video controller.

The Hardware tab displays only information.

15.1.1 Services Tab



The Services Tab shows all the services installed on the monitored computer and their status.

Their icon is displayed at the left side

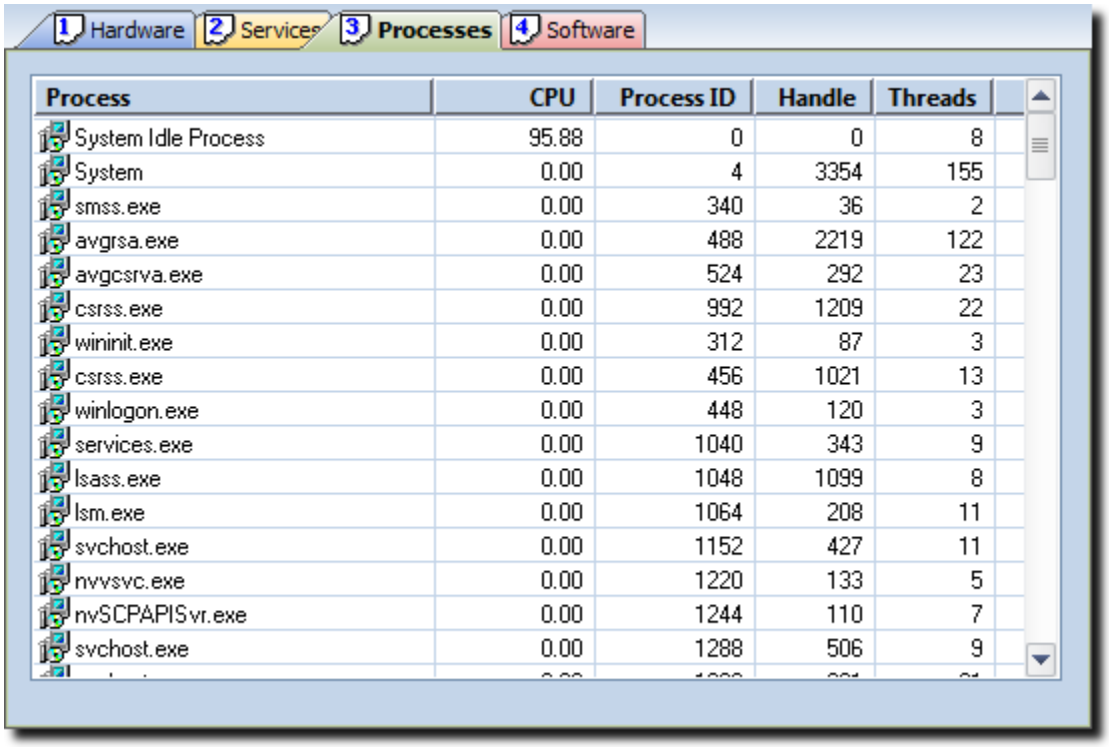
15.1.1.1 Service Operation

Selecting a service and pressing the right mouse button will open a popup window with possible actions.

- If the selected service is **Stopped,** you will be given the option to start it.
- If the selected service is **Running,** you will be given two options: to stop or restart the service.

According to your selection, the service will be stopped, started or restarted applicably. Please note that for the services with the **Disabled** mode no pop up window will be opened since no action can be done.

15.1.2 Processes Tab

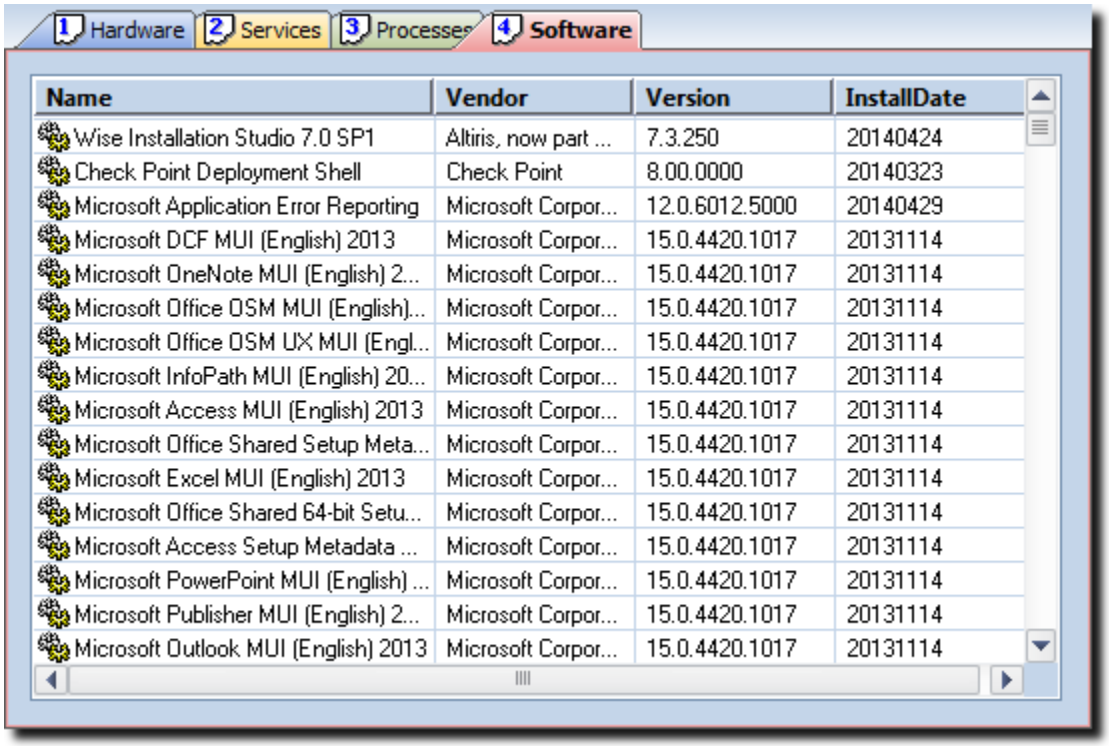


The Processes Tab shows information about all the running processes.

15.1.2.1 Process Operation

Selecting a process and pressing the right mouse button will open a popup window with the possible **Terminate** action. Choosing this action will terminate the selected process.

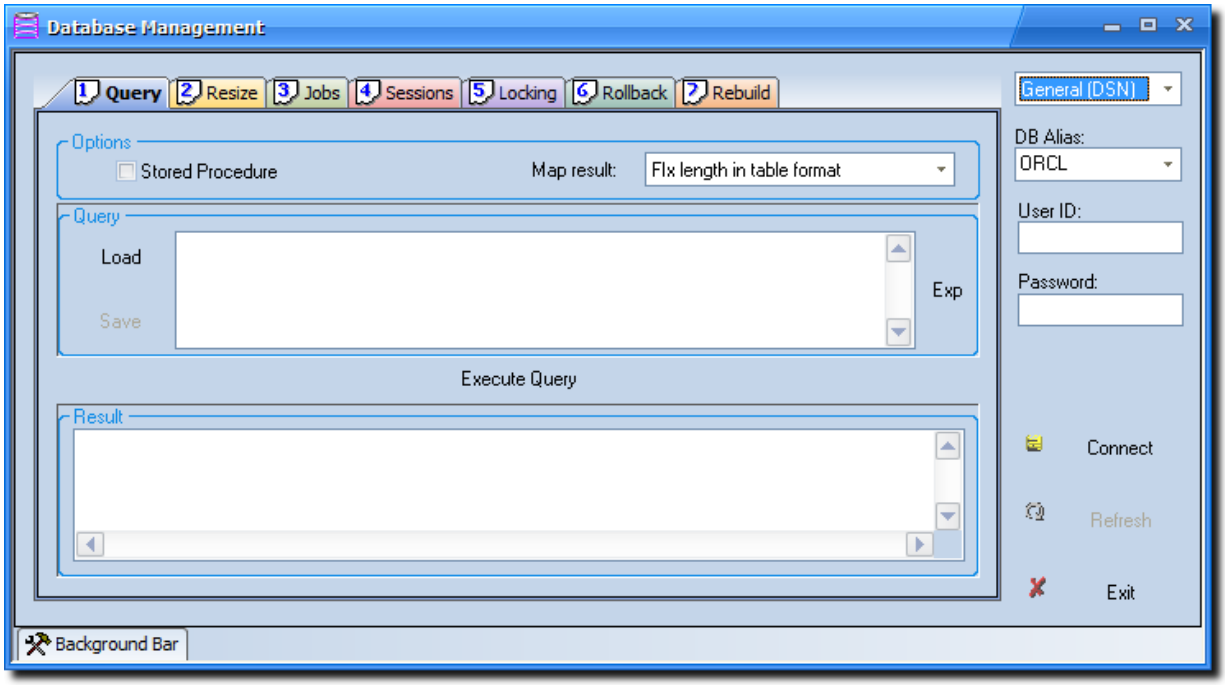
15.1.3 Software Tab



The Software Tab shows inventory of the installed software.
Please note that gathering the software might take some time.

15.2 Database Management

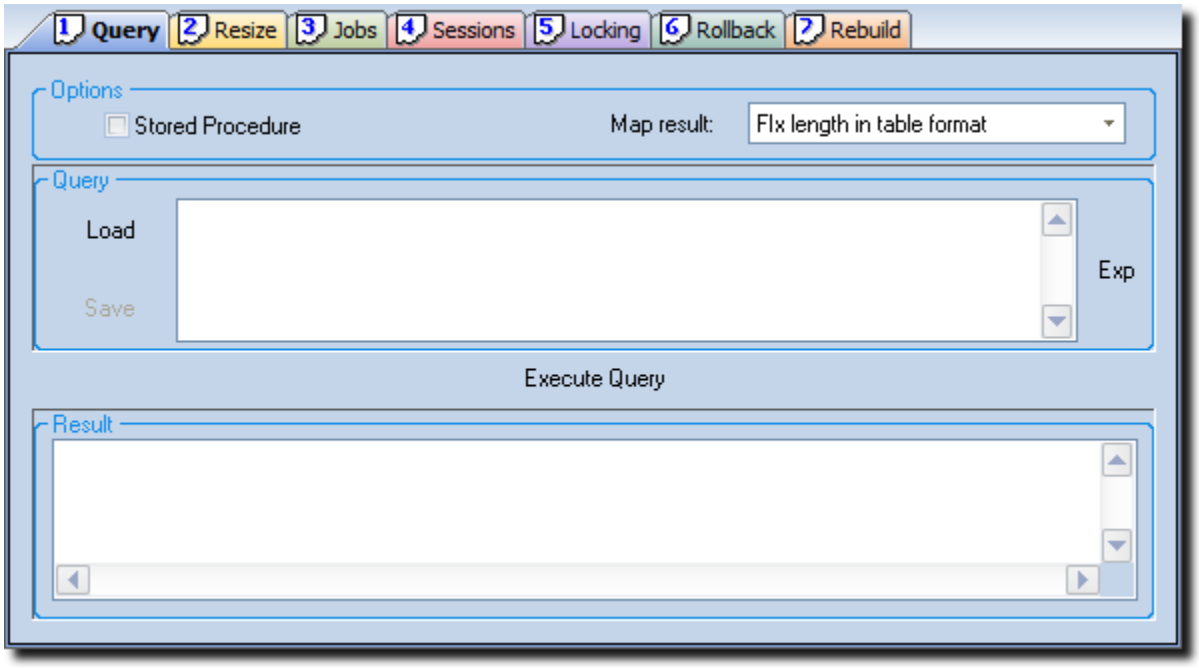
When starting Database Management the following screen will be displayed:



Database Management manages Oracle and SQL databases.
Oracle client must be installed at the same computer where the EventStudio is running.

In order to gain control, you must first perform a login to the database. Until you login, all the Database Management tabs will be locked and can not be used.
Fill the DB Alias (Host String), User ID, Password and press the Refresh button to login to the database.

15.2.1 Query Tab



Query Tab is used for performing a user query against Oracle.
Type the query you want to execute at the Query windows and then press the **Execute Query** button. The query result will be displayed on the Result window.
Load and **Save** buttons allow us to save the user queries.

15.2.2 Resize Tab

When selecting the Resize Tab, similar windows will be displayed:

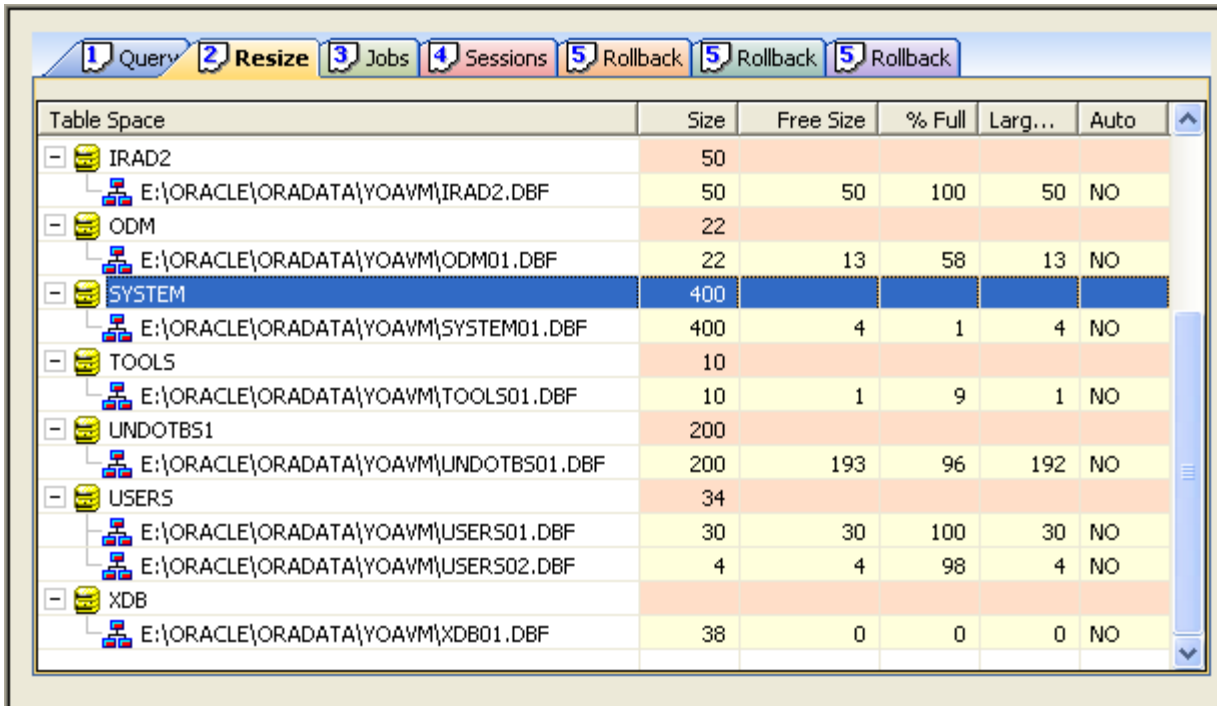
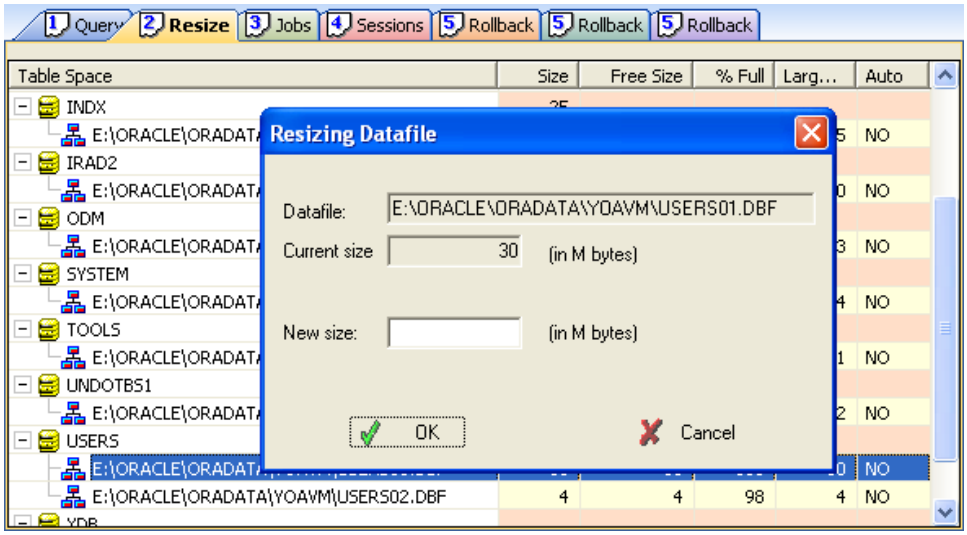


Table Space	Size	Free Size	% Full	Larg...	Auto
IRAD2	50				
E:\ORACLE\ORADATA\YOAVM\IRAD2.DBF	50	50	100	50	NO
ODM	22				
E:\ORACLE\ORADATA\YOAVM\ODM01.DBF	22	13	58	13	NO
SYSTEM	400				
E:\ORACLE\ORADATA\YOAVM\SYSTEM01.DBF	400	4	1	4	NO
TOOLS	10				
E:\ORACLE\ORADATA\YOAVM\TOOLS01.DBF	10	1	9	1	NO
UNDOTBS1	200				
E:\ORACLE\ORADATA\YOAVM\UNDOTBS01.DBF	200	193	96	192	NO
USERS	34				
E:\ORACLE\ORADATA\YOAVM\USERS01.DBF	30	30	100	30	NO
E:\ORACLE\ORADATA\YOAVM\USERS02.DBF	4	4	98	4	NO
XDB					
E:\ORACLE\ORADATA\YOAVM\XDB01.DBF	38	0	0	0	NO

The window shows the tablespaces and their datafiles.

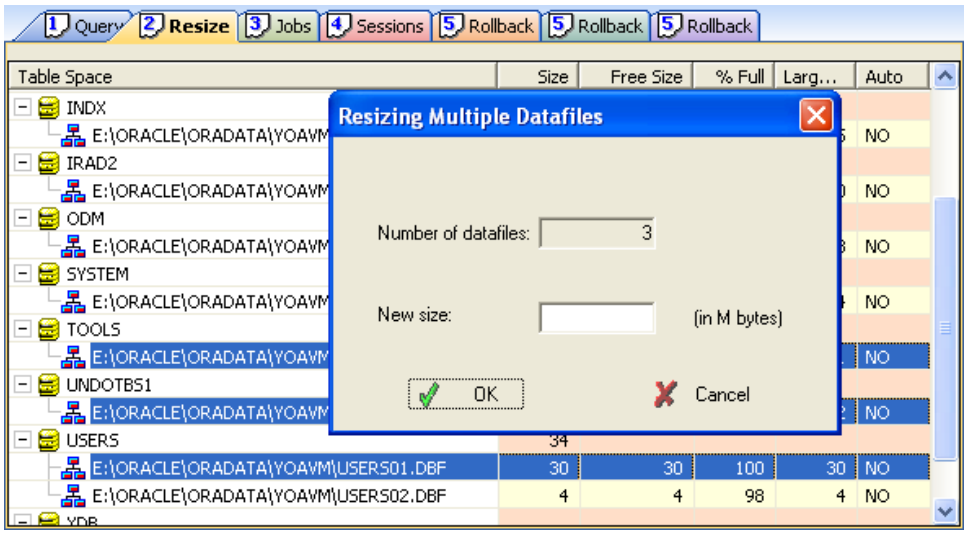
15.2.2.1 Resize Operation

Double click on the File Name entry and a similar dialog will be displayed:



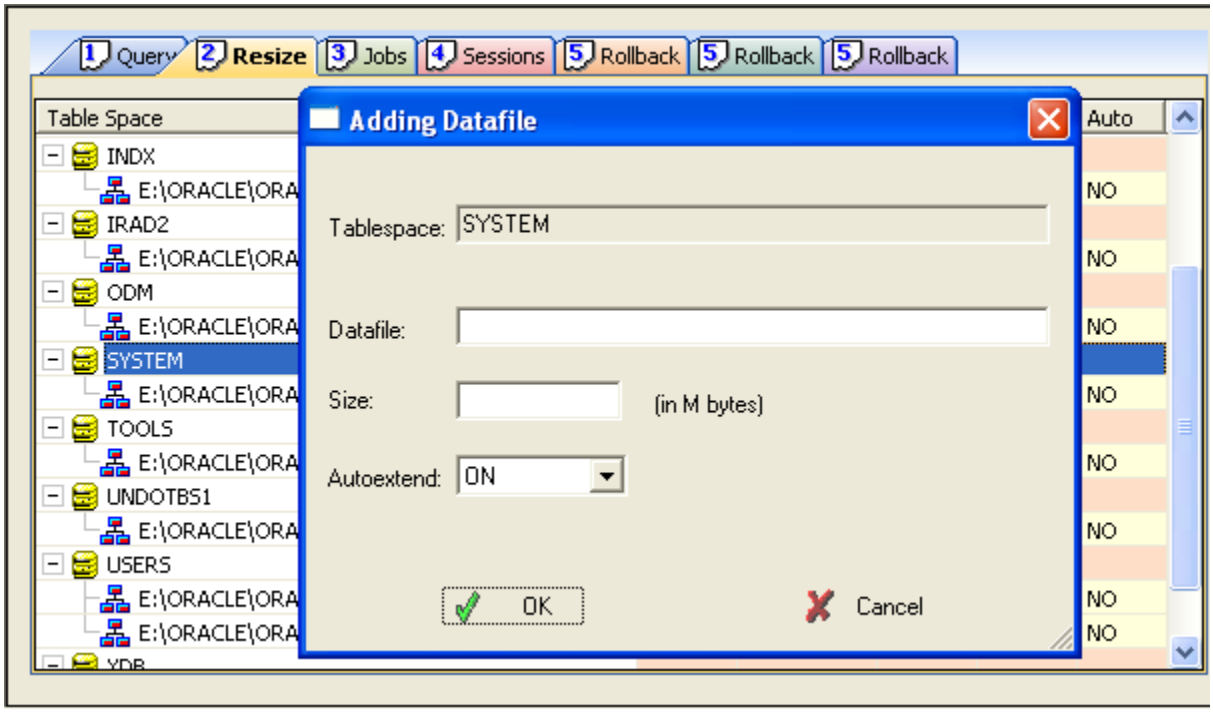
Type in a new size for the selected data file and press the OK button.
Event24x7 will perform the resize operation for the data file.

You can perform Resizing for several datafiles concurrently.
Select several datafiles and Double click on one of them.



15.2.2.2 Adding Data file Operation

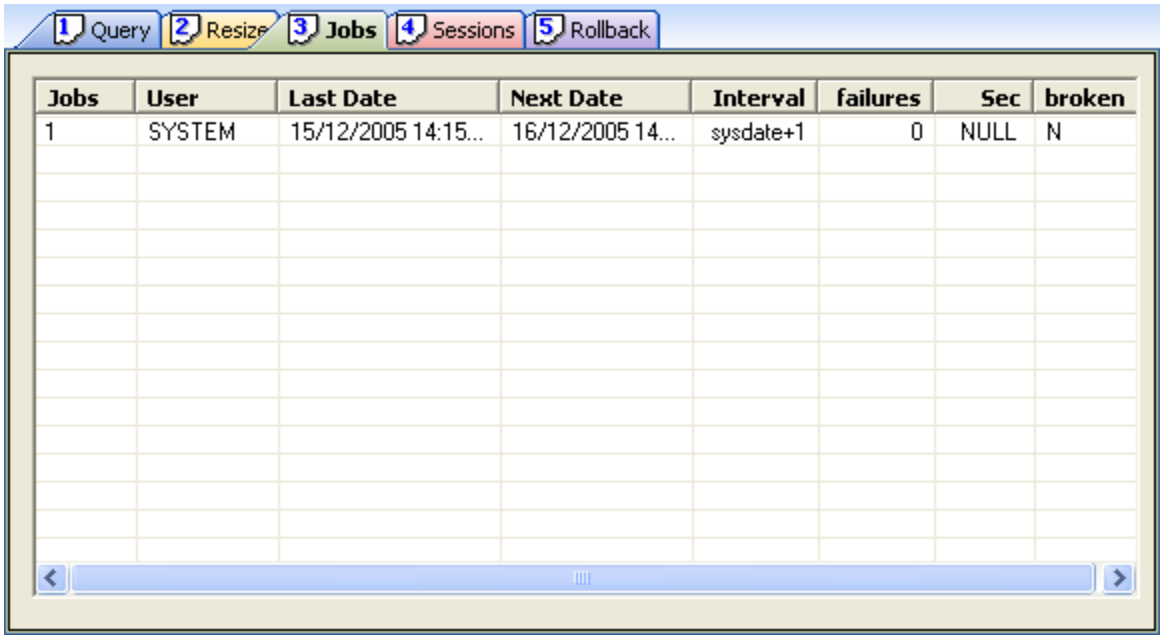
Selecting a tablespace and pressing the right mouse button will open a popup window with possible actions:



Fill the new data file name and the required size.

15.2.3 Job Tab

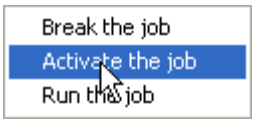
When selecting the Jobs Tab, similar windows will be displayed:



The Jobs tab manages Jobs and changes their status.

15.2.3.1 Jobs Operation

Selecting process and pressing the right mouse button will open a popup window with the following actions:

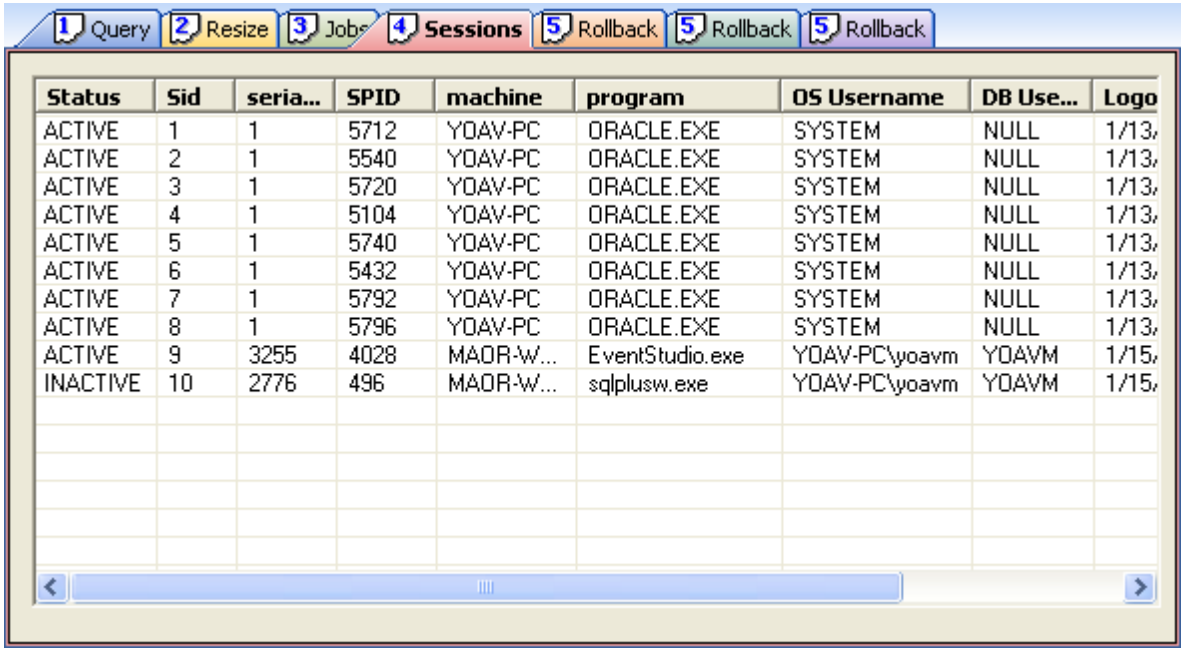


Choose one of the entries to perform the desired action.

Please note that running a job is done asynchronously. This action might take some time. In order to avoid a situation where the GUI stalls, it is done asynchronously.

15.2.4 Sessions Tab

When selecting the Sessions Tab, similar windows will be displayed:



Status	Sid	seria...	SPID	machine	program	OS Username	DB Use...	Logo
ACTIVE	1	1	5712	YOAV-PC	ORACLE.EXE	SYSTEM	NULL	1/13/
ACTIVE	2	1	5540	YOAV-PC	ORACLE.EXE	SYSTEM	NULL	1/13/
ACTIVE	3	1	5720	YOAV-PC	ORACLE.EXE	SYSTEM	NULL	1/13/
ACTIVE	4	1	5104	YOAV-PC	ORACLE.EXE	SYSTEM	NULL	1/13/
ACTIVE	5	1	5740	YOAV-PC	ORACLE.EXE	SYSTEM	NULL	1/13/
ACTIVE	6	1	5432	YOAV-PC	ORACLE.EXE	SYSTEM	NULL	1/13/
ACTIVE	7	1	5792	YOAV-PC	ORACLE.EXE	SYSTEM	NULL	1/13/
ACTIVE	8	1	5796	YOAV-PC	ORACLE.EXE	SYSTEM	NULL	1/13/
ACTIVE	9	3255	4028	MAOR-W...	EventStudio.exe	YOAV-PC\yoavm	YOAVM	1/15/
INACTIVE	10	2776	496	MAOR-W...	sqlplusw.exe	YOAV-PC\yoavm	YOAVM	1/15/

The sessions tab Shows current sessions and what they do and give you the option to kill the session.

15.2.4.1 Process Operation

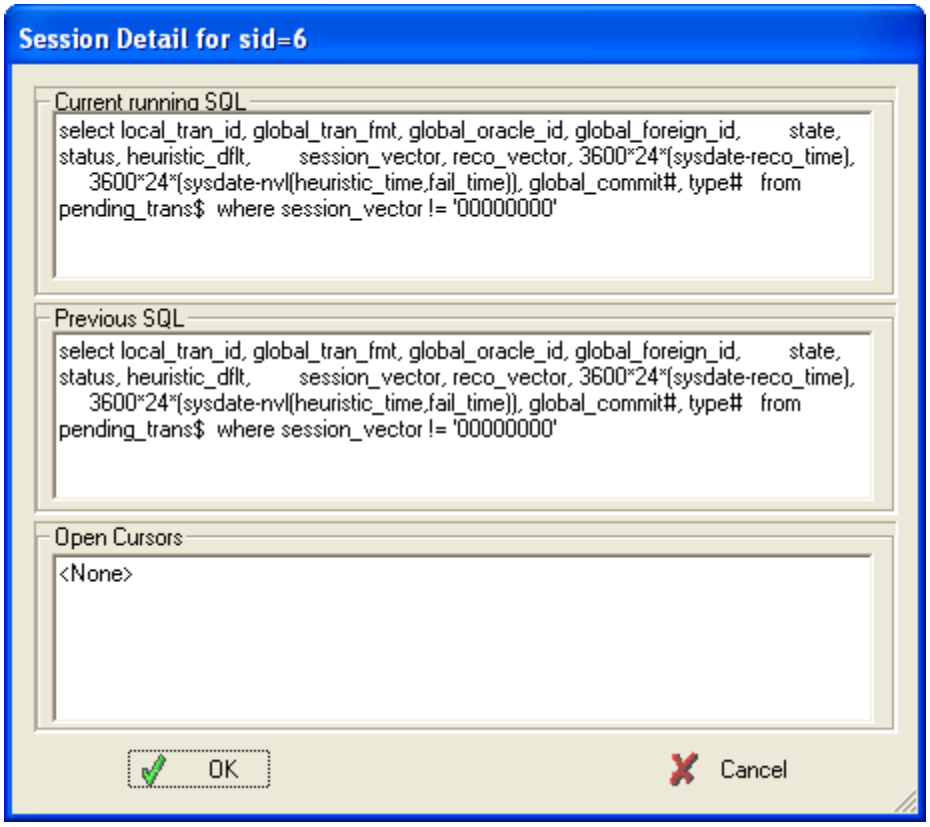
Kill Session

Selecting a session and pressing the right mouse button will open a popup window with the possible **Kill the Session** action.

Choosing this action will kill the selected Session.
Please note that Kill the session is done asynchronously. This action might take some time. In order to avoid a situation where the GUI stalls, it is done asynchronously.

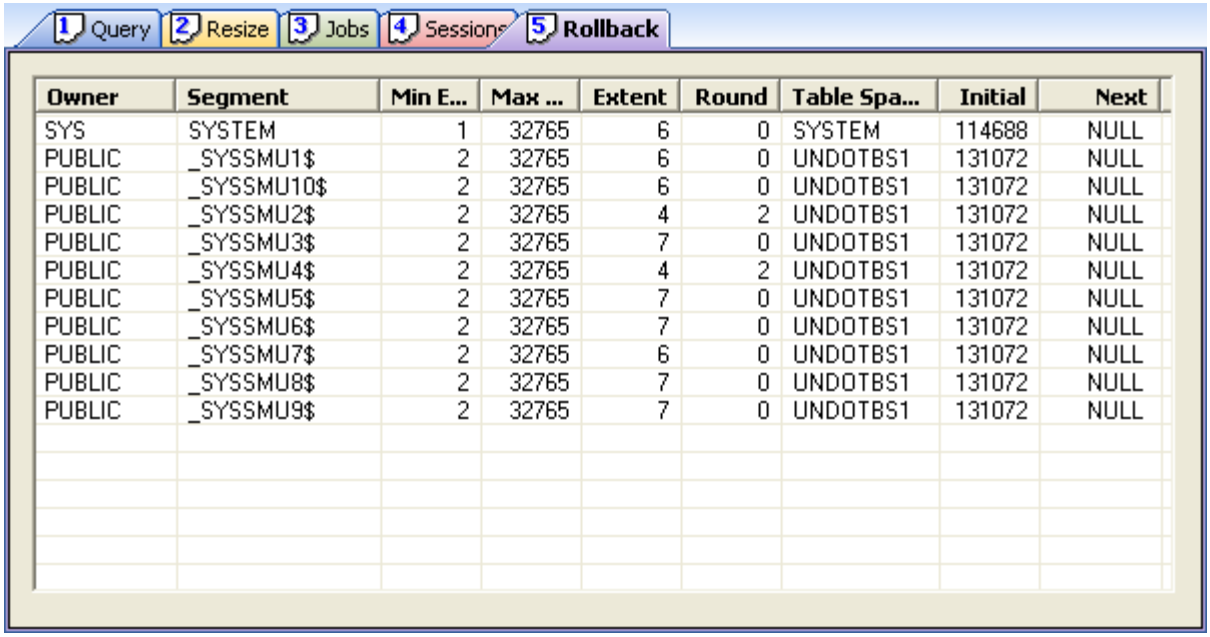
Session SQL performance

Double click on a session entry and the SQL performance dialog will be displayed:


Session Detail for sid=6
Current running SQL
select local_tran_id, global_tran_fmt, global_oracle_id, global_foreign_id, state, status, heuristic_dflt, session_vector, reco_vector, 3600*24*(sysdate-reco_time), 3600*24*(sysdate-nvl(heuristic_time,fail_time)), global_commit#, type# from pending_trans$ where session_vector != '00000000'
Previous SQL
select local_tran_id, global_tran_fmt, global_oracle_id, global_foreign_id, state, status, heuristic_dflt, session_vector, reco_vector, 3600*24*(sysdate-reco_time), 3600*24*(sysdate-nvl(heuristic_time,fail_time)), global_commit#, type# from pending_trans$ where session_vector != '00000000'
Open Cursors
<None>
OK
Cancel

15.2.5 Rollback Tab

When selecting the Rollback Tab, similar windows will be displayed:



Owner	Segment	Min E...	Max ...	Extent	Round	Table Spa...	Initial	Next
SYS	SYSTEM	1	32765	6	0	SYSTEM	114688	NULL
PUBLIC	_SYSSMU1$	2	32765	6	0	UNDOTBS1	131072	NULL
PUBLIC	_SYSSMU10$	2	32765	6	0	UNDOTBS1	131072	NULL
PUBLIC	_SYSSMU2$	2	32765	4	2	UNDOTBS1	131072	NULL
PUBLIC	_SYSSMU3$	2	32765	7	0	UNDOTBS1	131072	NULL
PUBLIC	_SYSSMU4$	2	32765	4	2	UNDOTBS1	131072	NULL
PUBLIC	_SYSSMU5$	2	32765	7	0	UNDOTBS1	131072	NULL
PUBLIC	_SYSSMU6$	2	32765	7	0	UNDOTBS1	131072	NULL
PUBLIC	_SYSSMU7$	2	32765	6	0	UNDOTBS1	131072	NULL
PUBLIC	_SYSSMU8$	2	32765	7	0	UNDOTBS1	131072	NULL
PUBLIC	_SYSSMU9$	2	32765	7	0	UNDOTBS1	131072	NULL

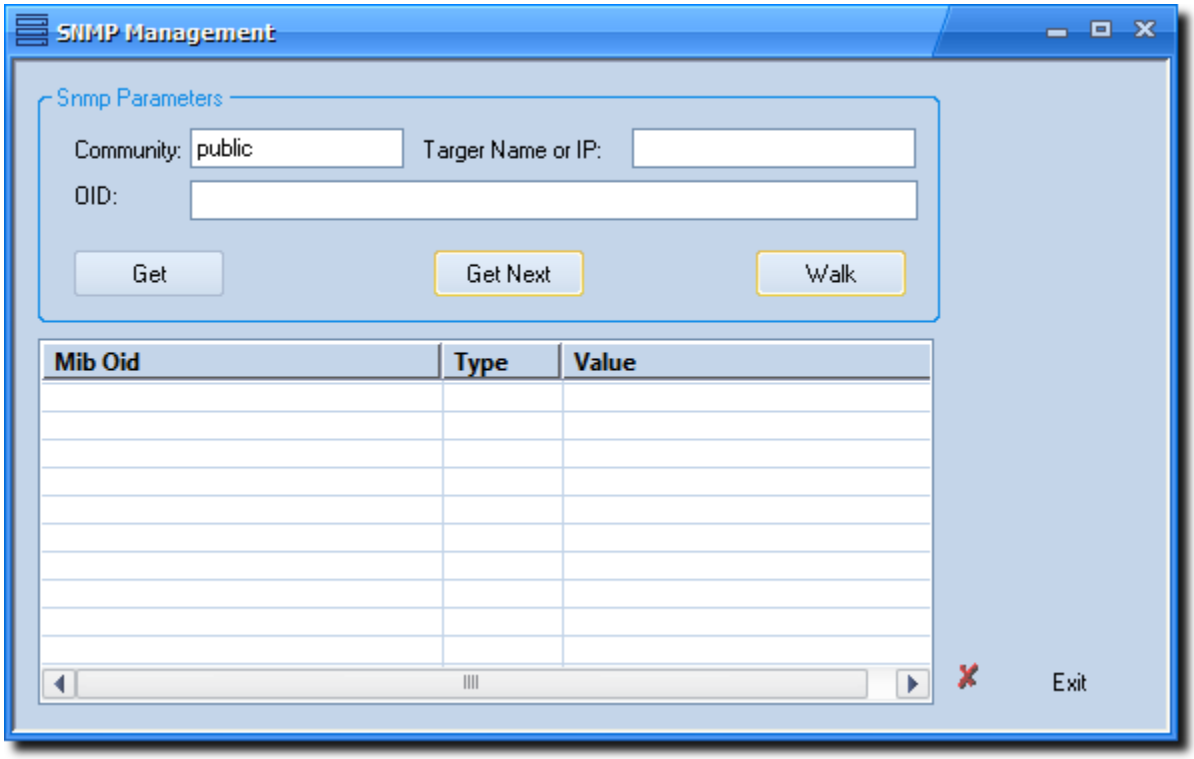
15.2.5.1 Rollback Operation

Selecting an entry and pressing the right mouse button will open a popup window with the following possible action:

Select it and the Shrink operation will be performed.
Please note that the Shrink operation is done asynchronously. This action might take some time. In order to avoid a situation where the GUI stalls, it is done asynchronously.

15.3 SNMP Management

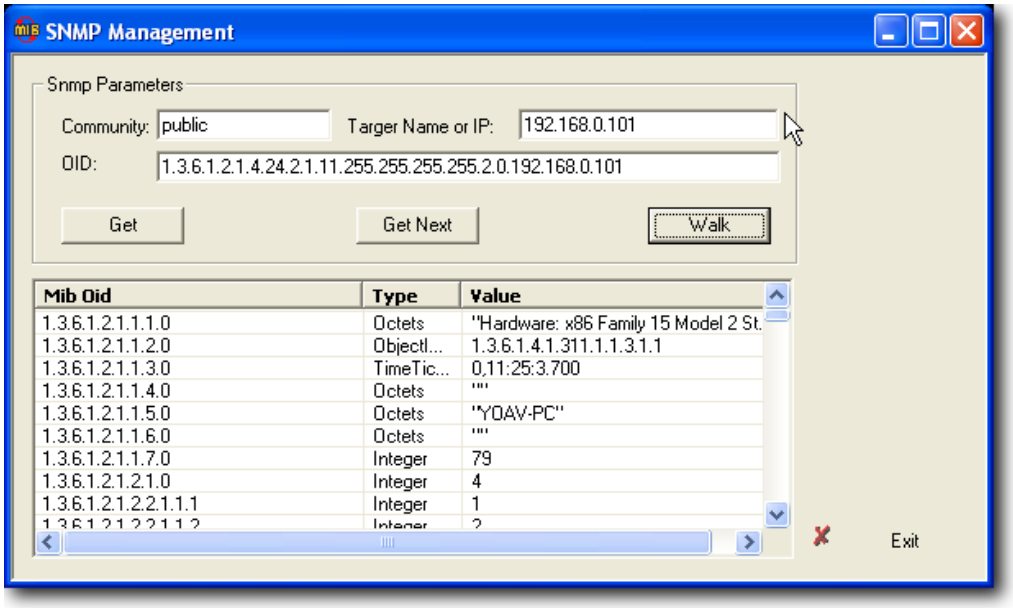
When starting SNMP Management the following screen will be displayed:



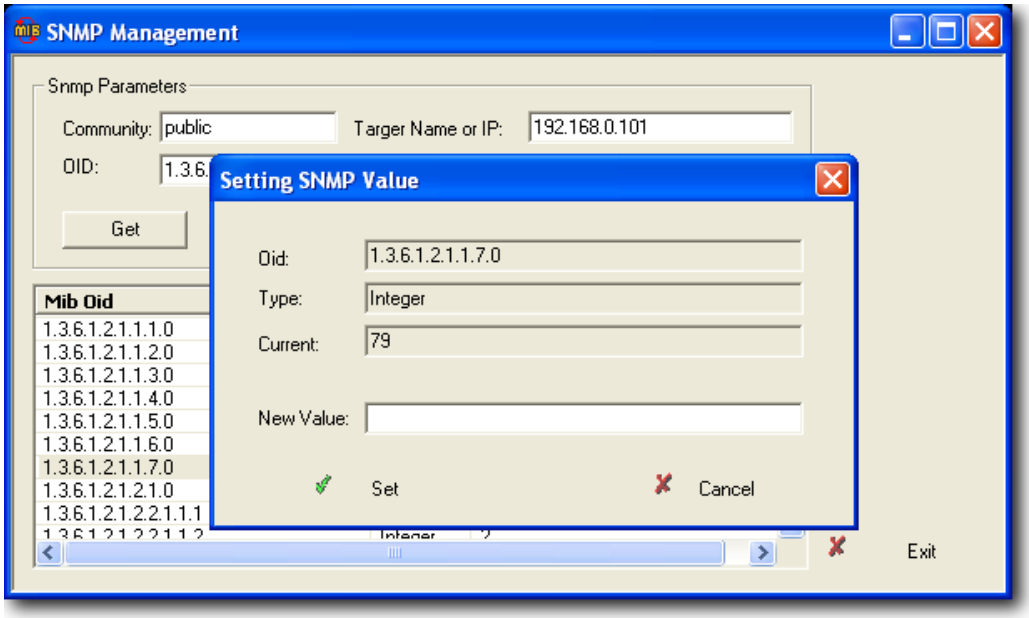
SNMP Management manages MIB entries from any equipment that supports MIB.
The SNMP Management screen displays an OID by operations Walk, Get or Get Next.

15.3.1 Handling OIDs

Type the target IP and set the complete OID or just OID prefix.
For example, setting the OID field to "1.3.6.1" and pressing the Walk button will return the following result:



The first 500 entries are displayed.
Double click on a specific OID will open a pop-up dialog for setting a new value for the OID.



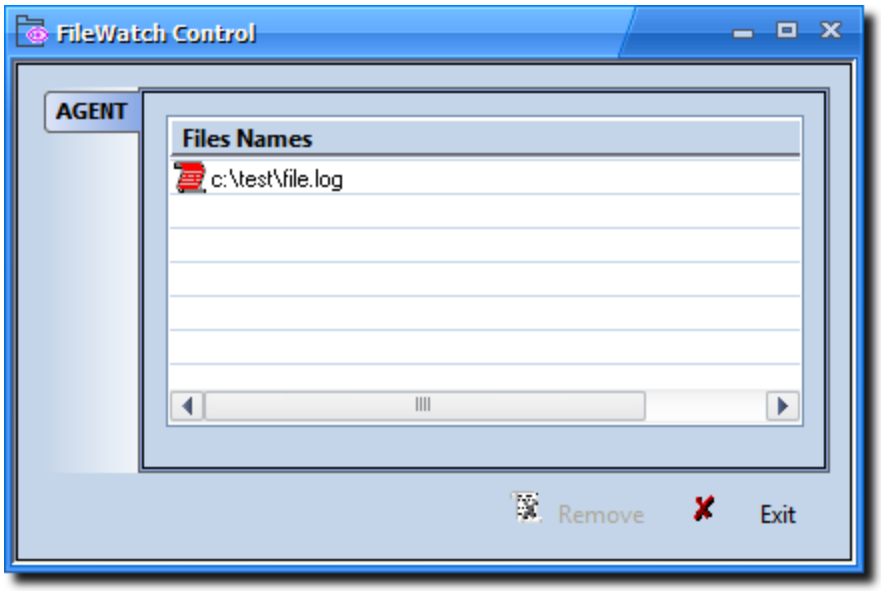
15.4 FileWatch Control

FileWatch Control is part of the Event24x7 User Log Watch facility for Windows platforms (either agent or agentless) and UNIX.

When Event24x7 requests to watch a user log file, any new record written to the file is read and sent to the Rule system and to the file watch and exception monitors if they exist. Least but not least, this record is displayed on the Focal Point and the Terminal of the log's session if it opens.

In addition to the above activities, it is sometimes requested to let the user view each such log file as a separate unit like a file viewer. FileWatch Control keeps the list of the log files and enables the user to open a file viewer to see the log files.

When starting the FileWatch Control, if user log files exist there, similar windows will be displayed:



For each session the windows display the list of the files under the FileWatch Control.

15.4.1 File Icon status

The background color of the icon displayed at the left side of each file represents the file view status.

No new lines added to the watched file since it was viewed.

Noticed state. Lines were added and were not viewed. However, the user selects this line from the list. As a result the status changed to Noticed.

New lines were added to the watched file and the file was not noticed.

15.4.2 Opening the file viewer

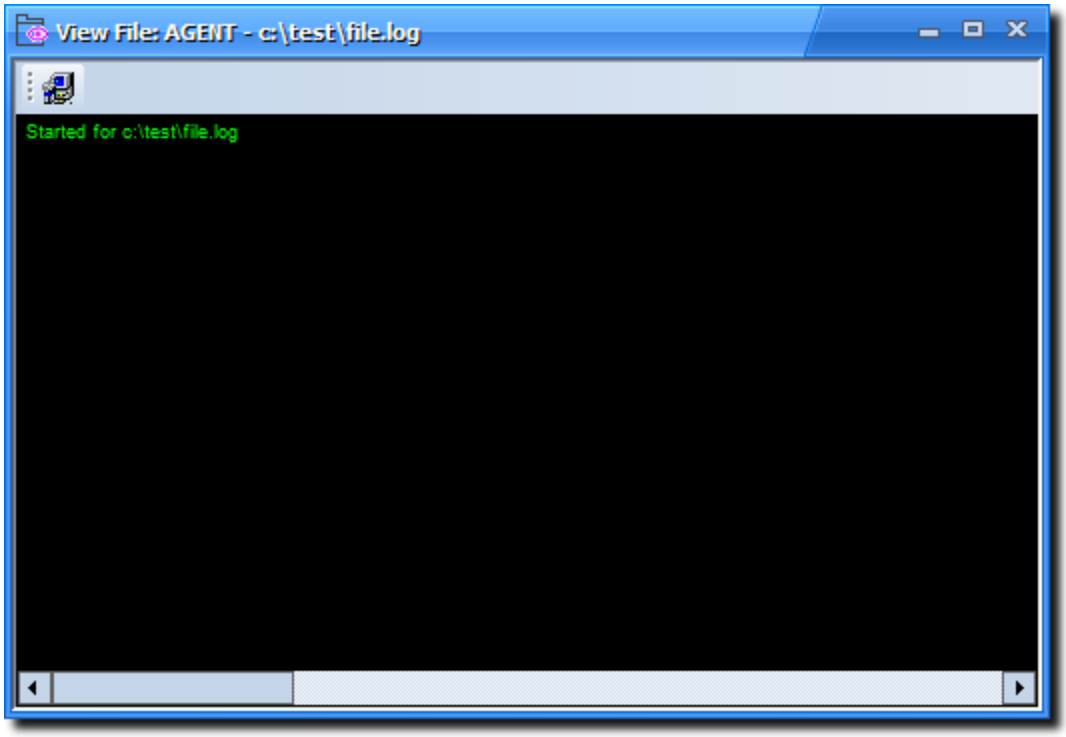
File viewer might be opened by two options:

- Manually
  Double click on a file entry from the file list.

- Automatically
  The file viewer opens automatically for a file with the "Open Viewer Automatically" option when a new record was added. Setting this option is done from the User Log Watch request or dynamically by the "Set Popup" button from the FileWatch Control windows.

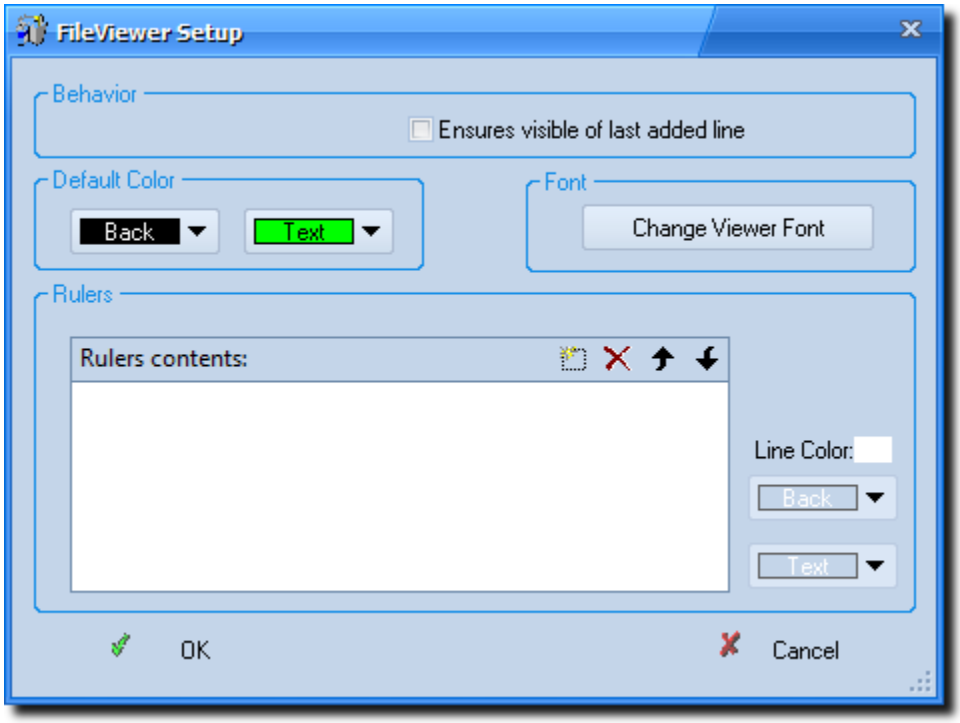
15.4.3 File Viewer

When opened, it might look like the following window:



File viewer has several uses.
It is used to display log files. The log itself may reside on a remote computer. It can be displayed on any computer that has EventStudio. No need to make the file shared.
It is used to monitor important changes in the log file. The user can define a rule to color certain lines with different colors so they will be highlighted. In the above example lines that contain the string "failed" will have a red background color while lines with the string "successfully" will have a Green background color.

15.4.3.1 File Viewer setup



Behavior	Make sure that the last added line will be visible.
Default Color	Default screen colors.
Font	Set the font
Rulers	Define rules for coloring certain lines

16. Event24x7 Variables

The user can define dynamic variables and can use special system variables and Functions.

16.1 User Variables

Event24x7 user variables have the format of**: $$n<varname>.**

Where: **$$** is the prefix that starts the variable.
n scope and search order.
1 - Local scope.
2 - Server scope.
4 – Universal scope.
<varname> The User Variable name

Absence of the scope from the name has the same meaning as specifying Local scope.

16.1.1 User Variables Resolution Search order

Event24x7 allows the user to define the order in which variables will be searched and resolved. This is very important since there might be variables with the same name defined in different scopes. The variable COUNTER can be defined as local in some rules, while in others it can be defined as Server or Universal. Although all of these variables have the same name, they are totally different variables with different values, so it is important to define for the rule processor, every time we use a variable, which one we are referring to.

Definition is done by telling the rule processor the order in which it should resolve the symbols. It is done by adding prefix numbers. For example:

- If we would like to tell the rule processor to search for a variable at the Server level (2) first, and then if it is not found to look for it in the Universal (4) name space then we should specify 6 as the variable's prefix (2+4 = 6). E.g. $$6COUNTER.

- If we would like to tell the rule processor to search for a variable at the Local level (1) first, and then if it is not found to look for it in the Universal (4) name space then we should specify 5 as the variable's prefix (1+4 = 5). E.g. $$5COUNTER.

- If we would like to tell the rule processor to search for a variable at the Local level (1) first, and if it is not found to look for it in the Server (2) name space, and last at the universal name space (4) then we should specify 7 as the variable's prefix (1+2+4 = 7). E.g. $$7COUNTER.

16.2 System Variables

System variables have the format of: $$#name.
The user cannot assign values to the system variables.
List of System variables:

Name	Description
DAY	Day of month as a decimal number (01 – 31)
DAYOFWEEK	Full weekday name
DAYOFYEAR	Day of year as a decimal number (001 – 366)
DATEKEY	Date as 19950314_12:41:29
DDMMYYYY	Date as 14031995
DDMMYYYY2	Date as 14-03-1995
MMDDYYYY	Date as 03141995
MMDDYYYY2	Date as 03-14-1995
YYYYMMDD	Date as 19950314
YYYYMMDD2	Date as 1995-03-14
MONTH	Month as decimal number (01 – 12)
MONTHNAME	Full month name
YEAR	Year with century, as a decimal number
TIME	Time as hhmmss
TIME0	Time as hhmm
TIME2	Time as hh:mm:ss
LONGDATETIME	Tuesday, March 14, 1995, 12:41:29
LONGDATE	Tuesday, March 14, 1995
RULENAME	For Rules returns the Rule Name
RULEGROUP	For Rules returns the Rule Group
SESSIONNAME	Name of the session the message has arrived from
WORDn	n=1, 2, 3..n Take the n-th word from the input. For example: typing "Test AAA BBB CCC" From the command line $$#WORD2 will be replaced by "AAA"
FWORDn	n=1, 2, 3..n Take from the n-th word to the end of the input.

Event24x7 automatically prepares the following System variables when a SNMP trap arrives to a SNMP session:

Name	Description
$$#SNMP_TEXT	Text only part of the trap. Usually the trap contains other fields (like Object's Identifier, Time Ticks etc.).
$$#SNMP_COMMUNITY	The Community
$$#SNMP_SENDER	TCPIP address of the Trap's sender.

16.3 Information Base Variables

This group returns the results of the Information Base commands. Each **Action**! command that belongs to the "IB xxx" group checks return codes for system activities. The result of the activity can be viewed and managed by these special IB variables.

Name	Description
VALUE	Returns the value of the last operation.
RC	Return code of the last activity: 1 – ended successfully 0 - failed
RC-<name>	Set of variables that have the same value as the RC but for each group of activities. RC is changed after each IB action. If you want to use the result of the **IB Service** later, the **RC-SERVICE** variable saves the RC from the latest IB Service request. Variables in this group: RC-BOOT, RC-RESOURCE, RC-SERVICE, RC-PROCESS.

Examples:

```
Disk Space drive c
IF  $$VALUE  <  3000
THEN
      Any Action! Activities
ENDIF
```

Meaning of the RC-SERVICE:

0	Stopped
1	Start Pending
2	Stop Pending
3	Running
4	Continue Pending
5	Pause Pending
6	Paused
7	Unknown
8	Not Exist

16.4 Performance Variables

16.4.1 System Variables

Name	Description
AUTOTEXT	The Auto text field
CESLOG	File name of the CES log file.
COLLECTOR	Different values according to the Collector: • Ping Target address • Http Server Address • User File File Name • Windows Object Object Name
DESC	The contents of the Description from the General tab
DESLOG	File name of the DES log file.
DESNAME	Name of current DES
DN	Name of current DES
FILENAME	Name of the Collector's temporary file name
FILENAME2	Name of the Collector's second temporary file name
MEMBERCOL	Name of the Collector
MEMBERMON	Name of the Monitor
MEMBERPRM	Name of the Parameter
MONITORFIELD1	General field 1 from the Monitor Fields tab.
MONITORFIELD2	General field 1 from the Monitor Fields tab.
MONITORFIELD3	General field 1 from the Monitor Fields tab.
MONITORFIELD4	General field 1 from the Monitor Fields tab.
MONITORFIELD5	General field 1 from the Monitor Fields tab.
MONITORPASSWORD	Password field from the Monitor Fields tab.
PRMADDRESS	Server Name from Session Configuration Performance Tab
PRMALLNAMES	List of all the Names
PRMCOUNTINSTATE	Count the number of cycles (checks) the parameter has the same state
PRMINDEX	Count the line from the collector's output that the State tab currently evaluates.
PRMELEMENTS	Total number of lines in the collector's output
PRMPORT	Port from the Session Configuration Performance Tab
PRMUSERNAME	User Name from the Session Configuration Performance Tab
PRMPASSWORD	Password from the Session Configuration Performance Tab
PRMCOUNTINSTATE	Count the number of consecutive cycles that the parameter's state remains the same.

PRMSTATEDIRECTION	The direction of the current state compared to the previous check: > 0 increased severity 0 remains the same < 0 decreased severity
PRMTHRESHOLDE PRMTHRESHOLDS PRMTHRESHOLDW	Returns the Threshold values for Error, Severe and Warning.
PRMVALUELIST	List of all the Values
SESSIONNAME	Returns the Session name.
PRMNAME	The current parameter name
PRMRESULTLINE	Print the last parameter result.
PRMSTATE	The current parameter state

PRMRESULTALL	Produce a table list of the last parameter result.
	It is designed especially for sending the result via email.
	
	For example, adding this variable as part of the Message part will produce a detailed list of the parameter's result.
	
	Typing the following in the mail message field:
	Result of check
	$$# PRMRESULTALL
	
	Might produce the email:
	`Result of check`
	
	`State Value Name`
	`======== ========== ==========`
	`Error 6.36 C:`
	`Warning 18.18 D:`
	`OK 33.09 E:`
	`OK 26.74 F:`
	`OK 73.58 G:`
	`OK 62.75 H:`

PRMRESULTALLERROR	Similar to PRMRESULTALL but display only objects that have not OK state (eliminate entries with OK state).
PRMRESULTCHECK5	Like PRMRESULTALL but prints only the first five lines.
SN	The Session name.
SNADDRESS	The session real address taken from the session definition.
UNIQUENAME	Create a unique name with the format of: <Session-Name>-<Parameter Name> Helpful for creating Table Talk table name.

16.4.2 System HTML mails Variables

Name	Description
HTMLRESULTALL	Same as PRMRESULTALL but with HTML format. Valid for sending mail with HTML support.
HTMLRESULTALLERROR	Similar to HTMLRESULTALL but display only objects that have not OK state (eliminate entries with OK state).
HTMLTHRESHOLD	Table with the parameter's Threshold.

16.4.3 System Event Viewer Variables

Name	Description
EVTLOGCATEGORY	Category
EVTLOGMESSAGE	Message Part
EVTLOGSOURCE	Source

16.4.4 System Downtime Variables

Name	Description
DT_NAME	Downtime Name
DT_DATESTART	Date Start
DT_TIMESTART	Time Start
DT_DATEEND	Date End
DT_TIMEEND	Time End
DT_STATUS	Downtime's Status
DT_ROOTCAUSE	Root Cause
DT_IMPACT	Impact
DT_RECOVER	Recover
DT_ENTITY	Entity
DT_SERVICE	Service
DT_THIRDPARTY	3rd Party
DT_SEVIRITY	Severity
DT_ENVIRONMENT	Environment
DT_TYPE	Type

17. Performance variables for multiple values

Name	Description
PRMVALUE-nnn	Retrieve the nnn value. The nnn is a number from 1 to the number of occurrences. nnn=1 retrieves the latest value and therefore it is the same as specifying PRMVALUE. nnn=2 retrieves the value before the latest .
PRMVALUE-CUR or PRMVALUE	Retrieve the Value of the current performance object.
PRMVALUE-NAME or PRMNAME	Retrieve the Name of the current performance object.
PRMVALUE-<name>	Retrieve the Value of the specified field name.
PRMVALUE-MAX	Retrieve the highest value from the list.
PRMVALUE-MIN	Retrieve the lowest value from the list.
PRMVALUE-AVE	Retrieve the average value from the list.
PRMVALUE-SUM	Summarize all the values in the list.
PRMVALUE-CNT	Count the number of the occurrences. (number of lines).
PRMINDEX	The number of the current object (current line)
PRMELEMENTS	Total number of occurrences.
PRMSTATE	State of the current object

17.1.1 User variables from Session Definition

These are User free variables that optionally can be defined at the Session Definition and can be used at any place in the Parameter's Definition.

Name	Description
SESSIONUSR1	User field 1
SESSIONUSR2	User field 2
SESSIONUSR3	User field 3
SESSIONUSR4	User field 4

17.1.2 User variables For Informing Tab

These are variable that can be used only at the Session's Informing tab.

Name	Description
SESSIONSTATUS	Returns sesNotActive or sesActive.
DESSTATUS	Returns desNotActive or desActive.

17.2 Parameter's latest value

You can access any defined parameter's latest value from any session by the following parameter function:

<session-name><parameter-name>

for example:

$$<AGENTLESS><SIZE_C>

You can use this function in the SET command or any other statements.

17.3 System Function

A System Function has the format of: $$%FunctionName <parameters 1>… <parameters n>

Please note that a function has parameters (single or more) that are taken from the line after the function name.

17.3.1 Date Functions

The Date functions retrieve the difference between two dates.

There are three date formats:

- International DDMMYYYY or extended DD-MM-YYYY
- USA MMDDYYYY or extended MM-DD-YYYY
- East YYYYMMDD or extended YYYY-MM-DD

17.3.1.1 Difference between date and current date

Structure of the function name:

4 characters	DIFF	
1 character	I | U | E	date format (International, USA or East)
1 character	D | H | M | S	return measurement (Days, Hours, Minutes, Seconds)
1 character	2	optional for extended date format

17.3.1.2 Difference between two dates

Structure of the function name:

4 characters	DIF2	
1 character	I | U | E	date format (International, USA or East)
1 character	D | H | M | S	return measurement (Days, Hours, Minutes, Seconds)
1 character	2	optional for extended date format

17.3.1.3 UNIX date support

Similar to the above date there is support for a UNIX date with the format of: Oct 11 14:47

Structure of the function name:

4 characters	DIFF	
1 character	X	UNIX date format
1 character	H | M | S	return measurement (Hours, Minutes, Seconds)

For retrieving the difference between two dates use the following:

Structure of the function name:

4 characters	DIF2	
1 character	X	UNIX date format
1 character	H | M | S	return measurement (Hours, Minutes, Seconds)

17.3.1.4 Old functions

Name	Description
DIFFDDMMYYYY	Date format : DDMMYYYYHHMMSS For example: 15042005173255
DIFFDDMMYYYY2	Date format : DD-MM-YYYY HH:MM:SS For example: 15-04-2005 17:32:55
DIFFMMDDYYYY	Date format : MMDDYYYYHHMMSS For example: 04152005173255
DIFFMMDDYYYY2	Date format : MM-DD-YYYY HH:MM:SS For example: 04-15-2005 17:32:55
DIFFYYYYMMDD	Date format : YYYYMMDDHHMMSS For example: 20050415173255
DIFFYYYYMMDD2	Date format : YYYY-MM-DD HH:MM:SS For example: 2005-04-15 17:32:55
DIFFWMI	Date format : YYYYMMDDHHMMSS For example: 20050415023340.000000+*** This date format is the result of Date fields retrieves by WMI request.

You can create a User variable that is in the date format for use with the date function by using the Event24x7 system variables.
For example:

```
$$#DDMMYYYY $$#TIME
```

Example for using the Date function:

```
IF    $$%DIFFDDMMYYYY2    $$2CHECK6 > 120
THEN
      Do something
THEN-END
```

17.3.2 Size Functions

The Size functions format size in bytes for print out. It takes the size and converts it to a string with G, M or K sign.

Name	Description
FORMATSIZE	Parameter is size in bytes.

17.3.3 Service Status Functions

The Service status function translates the return code of the service status into a real explanation.

Name	Description
SERSTATUS	Parameter is the Status return code

17.3.4 Table Lookup Functions

The Table Lookup function translates numeric values into string.

Name	Description
LOOKUP	<script table> <number>

17.3.5 String Functions

Name	Description
STRFIND	usage: $$%STRFIND < string1> < string2> Returns 1 – if the first parameter contains second string Returns 0 – does not contain
STRSUBSTR	$$%STRSUBSTR <string1> <from> <Length> Return the substring of "string1". If length less than 1 it returns the end of "string1"
STRLEFT	usage: $$%STRLEFT <string1> <Length> Return the prefix of string1
STRRIGHT	usage: $$%STRRIGHT <string1> <Length> Return the suffix of string1

17.3.6 Count Occurrences in State

Count Occurrences of Parameter ‘state during time from the CSV.

Name	Description
COUNTSTATE	<session> <parameter> <minutes> <count type> For example: $$%COUNTSTATE AGENT CPU 5 1

session	Session Name
parameter	Parameter Name
minutes	Minute to search the CSV
count type	What type of state we want to count? Options: • 0 - OK • 1 - Warning Only • 2 - Warning and Above • 3 - Error Only • 4 - Error and Above • 5 - Severe Only

18. Packaging User Solutions

18.1 General

Event24x7 comes with several pre defined solutions like Oracle, SQL and Exchange etc. The same mechanism is opened for the users to package their own solutions.

A User solution might be built from the following components:

- Monitors
- Collectors
- Parameters
- Rules
- IBs

In addition there is a control file that combines all the components to a single solution.

18.2 Creating A User Solution

Follow these steps to create A User solution:

- Create the solution with the components you need. As described above you can use any combination of Monitors, Collectors, Parameters, Rules and IBs.
- Copy the Monitor, Collectors and Parameters to the Skeleton library.
  The skeleton library is located at <CES installation directory>/ PerformanceSkeleton

- Create the control file <Solution Name>.skl

18.3 Creating an Entry at the Skeleton Library

Two steps in creating the skeleton library.
First you have to choose the right sub directories and then copy the files.

18.3.1 Choosing the directories

- First sub directory below the PerformanceSkeleton sub directory.
  It is the Operating system of the Session. Check the Session Configuration dialog at Connection->Interface tab. Look at the Session Type field. It can be one of the following: Linux, NT, UNIX.

- Second sub directory below the PerformanceSkeleton.
  It is the content of the System type from the same Session configuration dialog.
  It can be the generic entry **ALL** that uses as a default all the specific entries from the system type.

  For example:
  Windows solution can be NT\ALL or NT\Agent, for solution that belongs to the Smart Agent (RES).

  UNIX solution can be UNIX\ALL for default or UNIX\HP for HP specific solution.

- Third level sub directory below the PerformanceSkeleton.
  Last level that contains the solution type. Can be one of the following:
  Monitor, Collector, Parameter, Rules and "Information Base".

18.3.2 Coping the files

Use the following rules:

- Remove the session name from the file name.
  If Monitor file name is NAPTUNE-CPU.mon the skeleton file name should be CPU.mon

- Don't use the real session name in the file itself. The session name is changed when applying the solution. Instead use the pre-processor $$#SESSIONNAME .
  When applying the solution Event24x7 will automatically replace $$#SESSIONNAME with the real session name.

18.4 Creating the solution control file

A Single control file with the extension of skl combines everything into package instructions.

The control file location is below the first sub directory as described at chapter 10.3.1 after choosing the directory paragraph.

Choose carefully the file name. The file name is the solution name that will appear at the Event24x7 Wizard.

18.4.1 SKL detailed file

Position	Len	
001 - 003	3	001 – Start new SKL
015 -		Skeleton name

Position	Len	
001 - 003	3	002) Description (optional)
015 -		Description

Position	Len	
001 - 003	3	005 – Session card (optional)
015 -		Session name

Position	Len	
001 - 003	3	010 – Collector and its parameters
015 -		Collector name, \x05, and list of the parameters separated by \x05

Position	Len	
001 - 003	3	020 – Rules
015 -		Rule Name

Position	Len	
001 - 003	3	030 – Information Base
015 -		Information base name

Cards 10, 20 and 30 can be repeated as many times as needed.

19. Advanced Topics

19.1 Traveling messages between DES and CES

19.1.1 General

The DES has connections to the various Sessions and it gets all the messages relating to the sessions. The DES sends the appropriate messages to the CES.
When Event24x7 deals with a huge number of messages, it is sometimes important to control the mechanism for better efficiency. This situation is likely to occur when the DES intercepts large user log files.

The CES has four uses for every log record sent from the DES:

1. Display the record at the Focal Point.
2. Display the record at the Session's Terminal.
3. Send the record to the Rule engine on the CES.
4. The record part of the File Watch Control sends the record to the file browser.

19.1.2 File Watch Control

If a record comes from s user log file that is under the File Watch Control, it will always be sent to the File watch Control. The user can't change this process.

19.1.3 Focal Point and Terminal

1. Rule triggered on the DES
   If a Rule is triggered on the DES due to an incoming record, it always controls whether to send the record to the CES.
   If at least one of the triggered rules has the "Suppress Message" option selected in the DO Display, the record will not be sent to the Focal Point

   Please note that you can always create a rule that suppresses the message.

2. No rule triggered
   Set according to the "Process on CES" option located on the Advanced tab in the Session configuration window.
   No – don't send to CES
   Yes – send to CES.

19.1.4 Rules

3. Rule triggered on DES
   By default a triggered rule will be sent to the Rule engine on the CES.

   It can be overridden by the string "Process on CES" and set to No on the General tab in the Rule Definition's Screen.

4. No rule triggered.
   Set according to "Process on CES" option located on the Advanced tab in the Session configuration window.
   No – don't send to CES.
   Yes – send to CES.

20. EventVoice

EventVoice is the voice server component of Event24x7.
It executes voice requests from voice scripts sent from Event24x7.

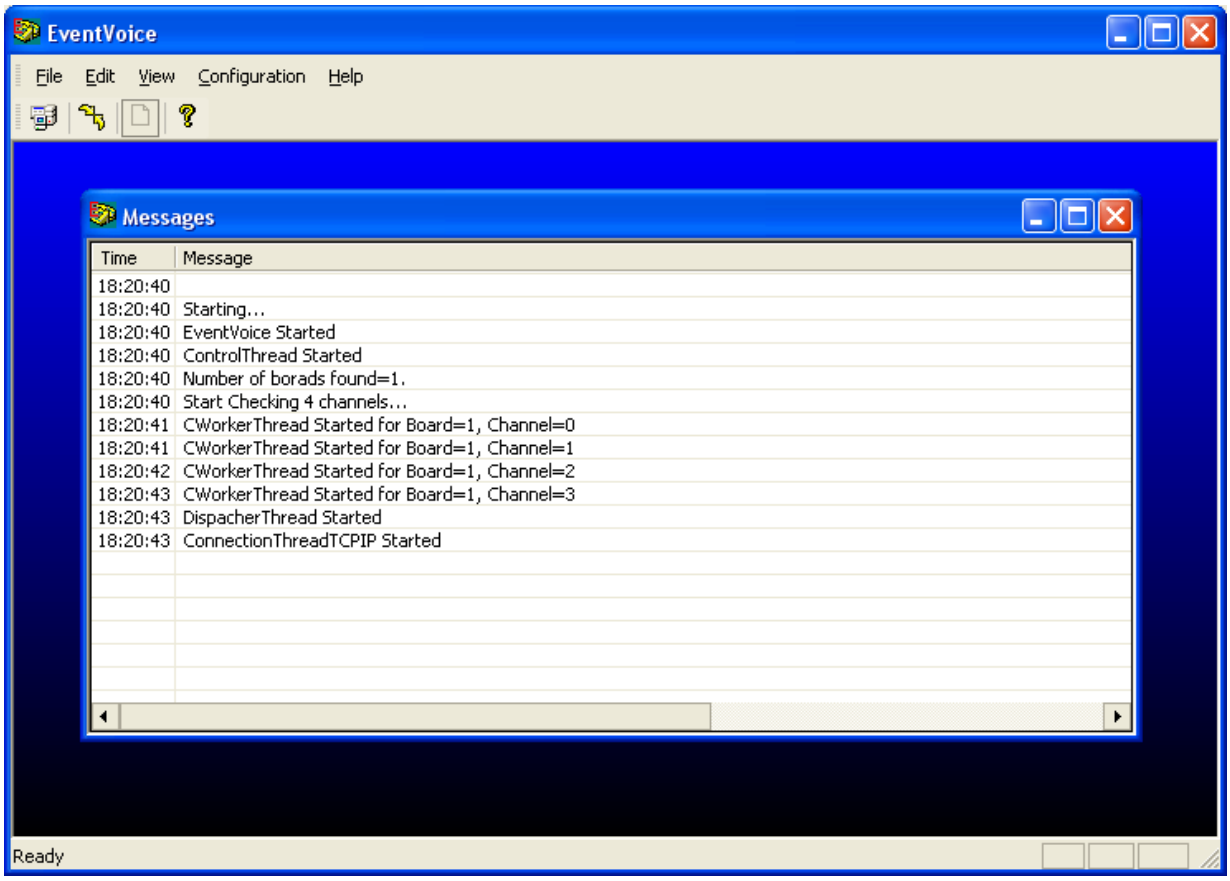
EventVoice may be installed on any Windows 2000/XP computer that has a Dialogic voice card installed. It does not have to reside on the same computer upon which Event24x7 CES or EventStudio are installed.
For detailed information regarding the installation of the Dialogic voice card and the board configuration steps please refer to the Event24x7 Installation Guide.

20.1 Starting EventVoice

Choose from the **Start** button**:**

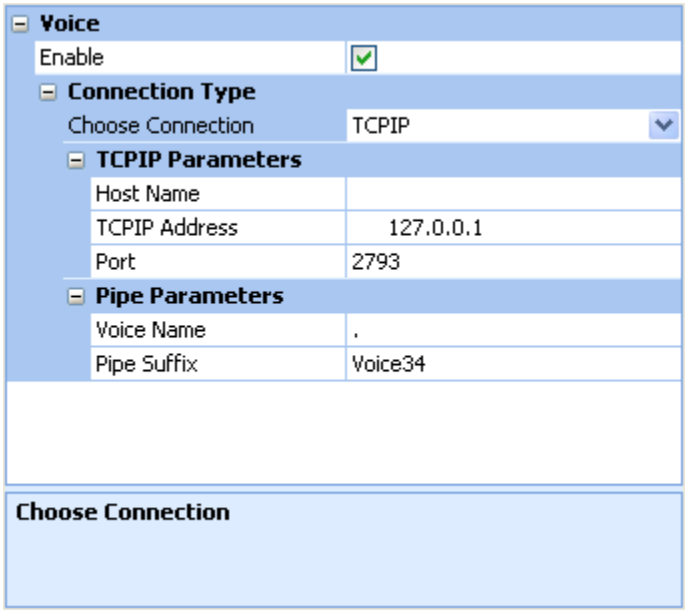
Start⇨All Programs⇨Event24x7⇨EventVoice

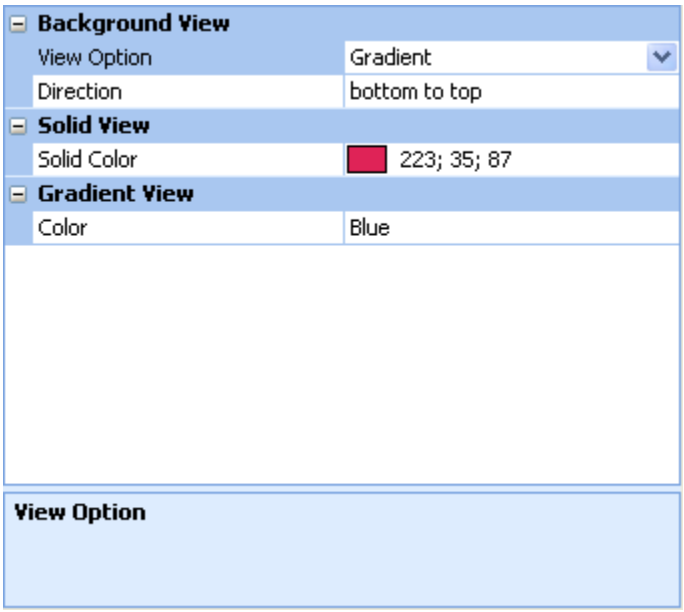
The EventVoice screen is displayed:



20.2 EventVoice Setup

The EventVoice setup lets you adjust the font and the background view of the terminal and the type of connection to Event24X7 CES. This is done via the Server configuration and Studio Configuration screens applicably:




Background View
View Option
Gradient
Direction
bottom to top
Solid View
Solid Color
223; 35; 87
Gradient View
Color
Blue
View Option

20.2.1 Background view

Choose view option	Choose the EventVoice background view. **Solid Color** – The background will have a solid color. **Gradient** – The background will have gradient effect.
Solid Color	Choose the solid color. The solid color will take effect only if **Solid Color** is chosen at **Choose view option**.
Color	Choose the base color for gradient option.
Direction	Set the gradient direction. Available options: **top to bottom**, **bottom to top**, **left to right**, **right to left**.

20.2.2 Connection Type

Setting up the connection type has the same effect as using the Event24x7 Setup program.
If you ran the Event24x7 Setup program, you can disregard the connection parameters.
For a detailed explanation on the Connection Type parameters please refer to the Event24x7 Installation Guide chapter 3 – Setup.

20.3 Refresh EventVoice Dictionary

The Event24x7 Speak Voice command sends a voice message to a phone number.
The EventVoice component performs a text-to-speak process to handle the request.
It analyzes word after word in the text. EventVoice tries to "Speak" Each word.
The "Speak" process is based upon the EventVoice Dictionary.

The Dictionary is a simple TXT file in which every line contains the following in free format:
<Word> <File to play>

When EventVoice needs to "Speak" a word it tries to locate the word in the dictionary.
If the word is found in the dictionary, EventVoice plays the <File to play> and moves to the next word in the text.
If the word is not found in the dictionary, EventVoice will pronounce the letters in the word one after the other.

You can add as many entries as you want to the dictionary.
EventVoice loads the dictionary during startup. If you made changes to the dictionary file you can refresh it by using this command.

Please note that EventVoice can play two types of voice files: VOX and WAV.
You can record those files using any third party program, or using the Event24x7 Record voice command.

The EventVoice Dictionary must be placed in the same directory where the EventVoice program is located.

20.4 EventVoice Startup Process

Upon starting EventVoice, it checks whether a voice card is installed on the computer.
If a card is not installed, or the services required for using the card (Configure from the Dialogic DCM program), are not available it will display an error message in the Message window. In this situation you must make the voice card operational before the EventVoice can work. Close EventVoice and refer to the Event24x7 Installation Guide for voice card configuration.

When EventVoice succeeds in locating the Dialogic voice cards, it automatically opens the cards and identifies the channels defined in each card. For example, Dialogic D4/PCI card can handle four different telephone lines concurrently. EventVoice verifies that each channel is connected to a working telephone line.

21. Security

Several Event24x7 components transfer information. The Central Event Server (CES) communicates with EventStudio, Remote Event Servers (RESs) and with EventVoice.
The Security mechanism does not allowed non-authorized persons to intercept the information transferred between Event24x7 components, or to send unauthorized messages to the CES.

The security mechanism has three layers:

- **Event24x7 signature.**
  Each packet sent from an Event24x7 component has a unique structure that contains an Event24x7 signature. A packet that does not comply with the Event24X7 structure and signature will be rejected automatically.

- **Compression**
  Compression has two advantages: better security and increased performance.
  Packet compression is optional. It can be set separately on each side of the communication. It is possible to have single sided compression.

- **Secure Sockets Layer**
  The SSL is based upon OpenSSL. OpenSSL provides a general-purpose cryptography library, as well as the Secure Sockets Layer v2/v3 (SSLv2/SSLv3) and Transport Layer Security v1 (TLSv1) network security protocols.
  SSL uses Public key cryptography for cryptographic algorithms.
  The algorithm uses two keys, each of which may be used to encrypt a message. If one key is used to encrypt a message then the other must be used to decrypt it. This makes it possible to receive secure messages by simply publishing one key (the public key) and keeping the other secret (the private key). Anyone may encrypt a message using the public key, but only the owner of the private key will be able to read it.
  Because of Public/Private keys approach, using the SSL in Event24x7 is bidirectional. It means that the two sides must negotiate and exchange keys.
  The Server is responsible for stating the negotiation. A Server sends a request to the other side to start the negotiating process. Next, keys are exchanged and encryption may be used.

22. Problem Determination

22.1 Concept

When facing a problem with Event24x7 there are three different phases to search for assistance:

- Event24x7 test external components programs.
- Event24x7 audit log file
- Event24x7 unexplained behavior.

22.1.1 Event24x7 test external components programs.

Some of the Event24x7 operations interact with external components.

- Voice operation depends on correct installation of the Dialogic voice card and its services.
- Sending mail operation depends on a working mail server.
- Establishing the Named Pipe connection depends on the current network.

When a problem occurs in these areas, it is sometime hard to tell whether the problem is internal to Event24x7 or whether one of the external components is responsible for the problem.
In order to isolate the cause of the problem, Event24x7 provides three simple test programs for each one of the actions.
Run the appropriate test program. Failure of the test program indicates that the problem occurred due to an external component and is not related to Event24x7.
Before testing the operation with Event24x7, please ensure that the test program works.
For more information see Event24x7 test external components programs section.

22.1.2 Event24x7 audit log file

Event24x7 manages an audit log file. The log file contains results from various Event24x7 activities.
The log file may shed some light on the problem roots.
For more information see Event24x7 Audit Log File section

22.2 Event24x7 test external components programs

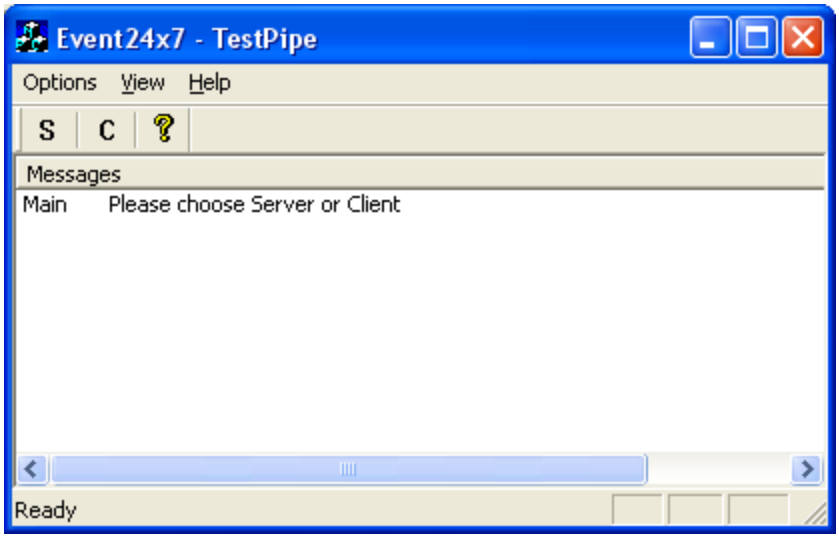
22.2.1 TestPipe Program

1. To start the pipe test program run the program:

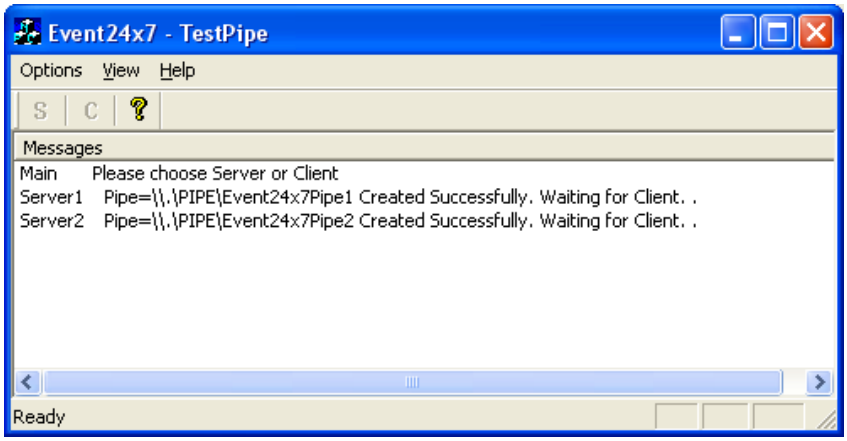
   <Event24x7 installation>\Tools\Test\TestPipe.exe

   Where <Event24x7 installation> is the Event24x7 installation location.

2. TestPipe GUI is displayed.



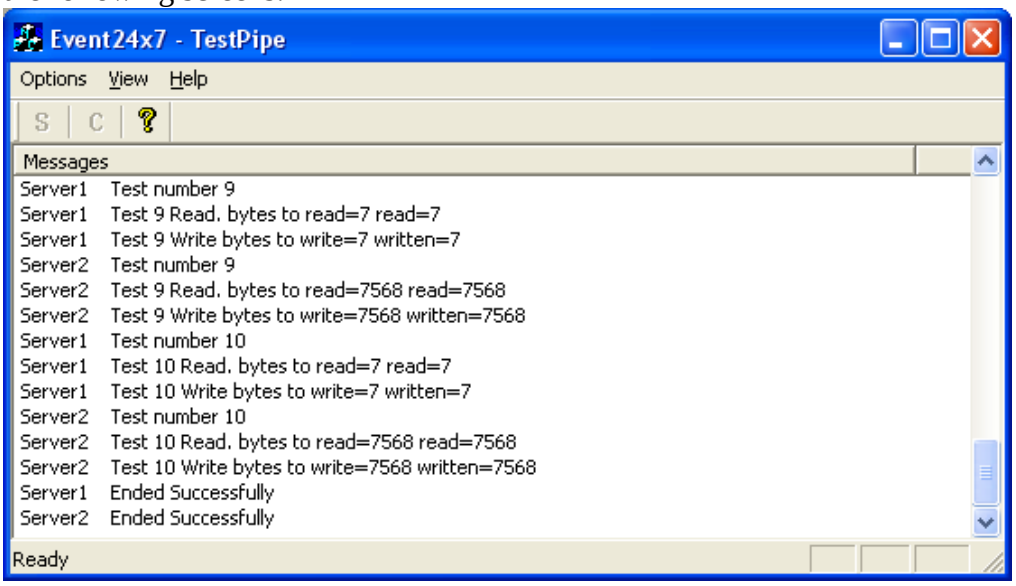
3. Choose the Server.
   Select the **Option⇨Server** from the main-menu or from the Toolbar.
   The following screen will be displayed:


Event24x7 - TestPipe
Options View Help
S C
Messages
Main Please choose Server or Client
Server1 Pipe=\\.\PIPE\Event24x7Pipe1 Created Successfully. Waiting for Client. .
Server2 Pipe=\\.\PIPE\Event24x7Pipe2 Created Successfully. Waiting for Client. .
Ready

4. Start another TestPipe program.
   This time choose the Client option
   Select the **Option⇨Client f**rom the main-menu or from the Toolbar.
   The following screen will be displayed:

   If you run the Client TestPipe program on the same computer as the Server then just type the OK button. If you run the Client from different computer then type the computer name of the Server in the "Server Name" field and type the OK buttons.

5. Results.
   If the Named Pipe connection was successfully established, the Client and the Server would communicate by a series of Read and Write messages. The operation will result in the following screens:


Event24x7 - TestPipe
Options View Help
S C
Messages
Server1 Test number 9
Server1 Test 9 Read. bytes to read=7 read=7
Server1 Test 9 Write bytes to write=7 written=7
Server2 Test number 9
Server2 Test 9 Read. bytes to read=7568 read=7568
Server2 Test 9 Write bytes to write=7568 written=7568
Server1 Test number 10
Server1 Test 10 Read. bytes to read=7 read=7
Server1 Test 10 Write bytes to write=7 written=7
Server2 Test number 10
Server2 Test 10 Read. bytes to read=7568 read=7568
Server2 Test 10 Write bytes to write=7568 written=7568
Server1 Ended Successfully
Server2 Ended Successfully
Ready

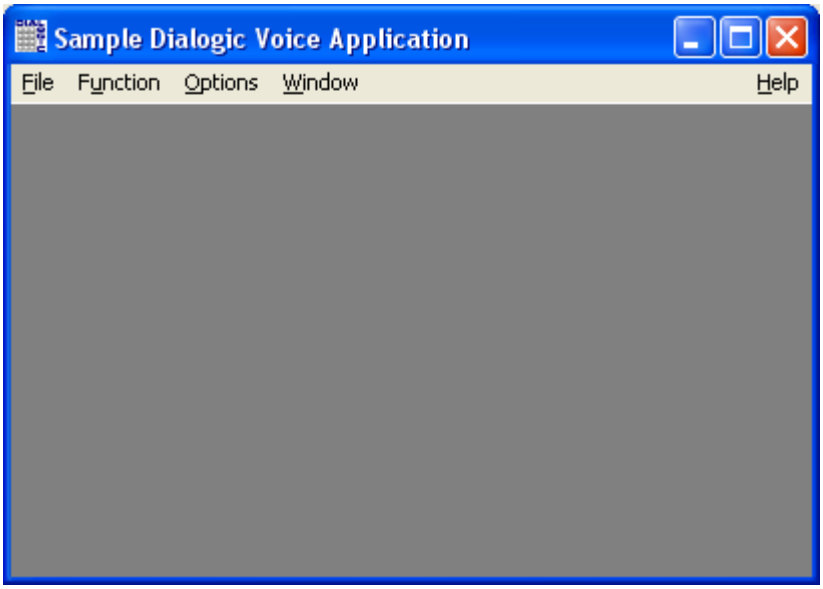
A similar screen would be seen at the Client side.

Any other results means that the Named pipe connection was not established.

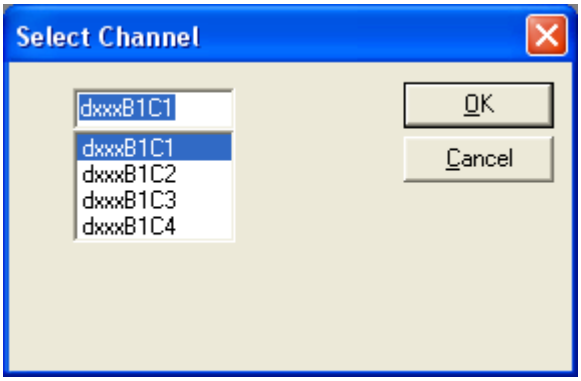
22.2.2 Test Voice Program

1. To start the voice test program, run the program:
   <Event24x7 installation>\Tools\Test\TestVoice.exe
   Where <Event24x7 installation> is the Event24x7 installation location.

2. TestVoice GUI is displayed:

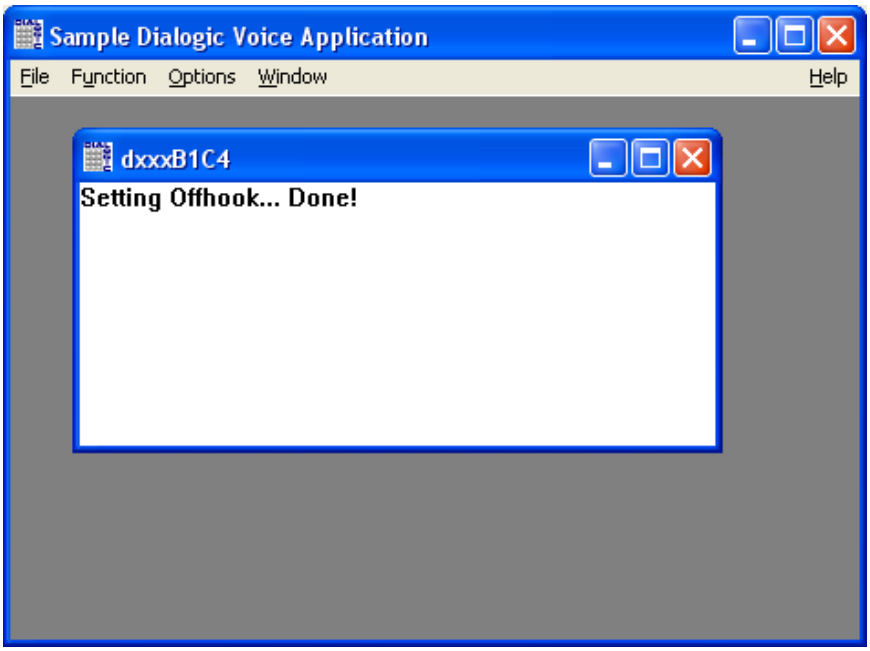


3. Open Channel.
   From the File submenu choose the Open option. A dialog with available channels will be opened:

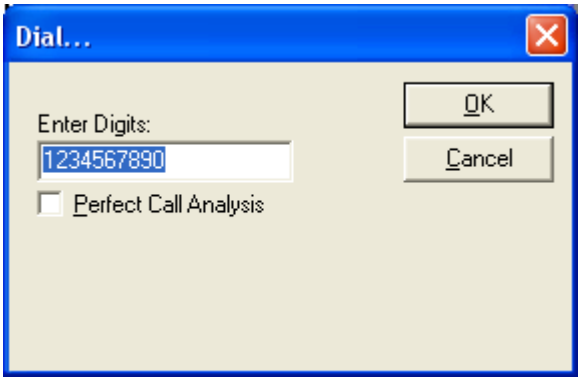


Make sure to select a channel that has a telephone line connected to it. The dialog displays all channels, even if they don't have a telephone line connected.

4. "Pick up the phone".
   From the Function submenu choose OffHook option.



5. Dial.
   Select the Function⇨Dial. The Dial dialog is opened:



   Fill in a valid number and click the OK button to dial it.
   Choose the number of a phone that is near you.

6. When the telephone rings, pick it up and say "hello".
   You must say something so that the voice program identifies that a human picked up the phone.

7. Playing.
   Choose play VOX and select "Sample.vox" from the same directory where the TestVoice program is installed on. The program should play the file.

8. Stop the call.
   Select the **Option⇨OnHook** option and then **Option⇨ Stop** to stop the session

22.2.3 Test Mail Program

- To start the mail test program, open DOS shell windows at the directory:

  <Event24x7 installation>\Tools\Test

  Activate the program as follows:

  Usage: TestMail <server> <username> <password> <sender-mail-address>

- If the TestMail succeeds an email would be sent to the **< sender-mail-address >.**
  The email content would be: "This is a test of Event24x7".

- The TestMail program creates a log file named: testMail.log.
  This file contains the error messages that describe the sending mail result.

22.3 Event24x7 Audit Log File

The audit log file resides on:
<Event24x7 CES installation>\Log YYYY-MM-DD.log

Where:
YYYY-MM-DD represents the current date. Each day at 00:00 the log is replaced automatically by the Event24x7 server.

The log file contains important messages for problem determination. The server **Debug Level** parameter controls the number of records that will be written**.**

The log file is simple text file. Its content look like this:

00:14:11 [3B8]
00:14:11 [3B8] Starting...
00:14:11 [3B8] Main Control Thread Started
00:14:11 [3B8] Installation Directory=F:\Event\CES\Main
00:14:20 [FF0] RuleCheck Thread [0] Started
00:14:21 [444] RuleCheck Thread [1] Started
00:14:22 [8D4] RuleCheck Thread [2] Started
00:14:22 [A08] RuleStructure Thread Started
00:14:22 [AA8] Every Minute Activities Thread (EMAT) Started
00:14:22 [AA8] ==>> Cycle at [0] [14]

Line structure:
Time, Thread ID and the message itself.

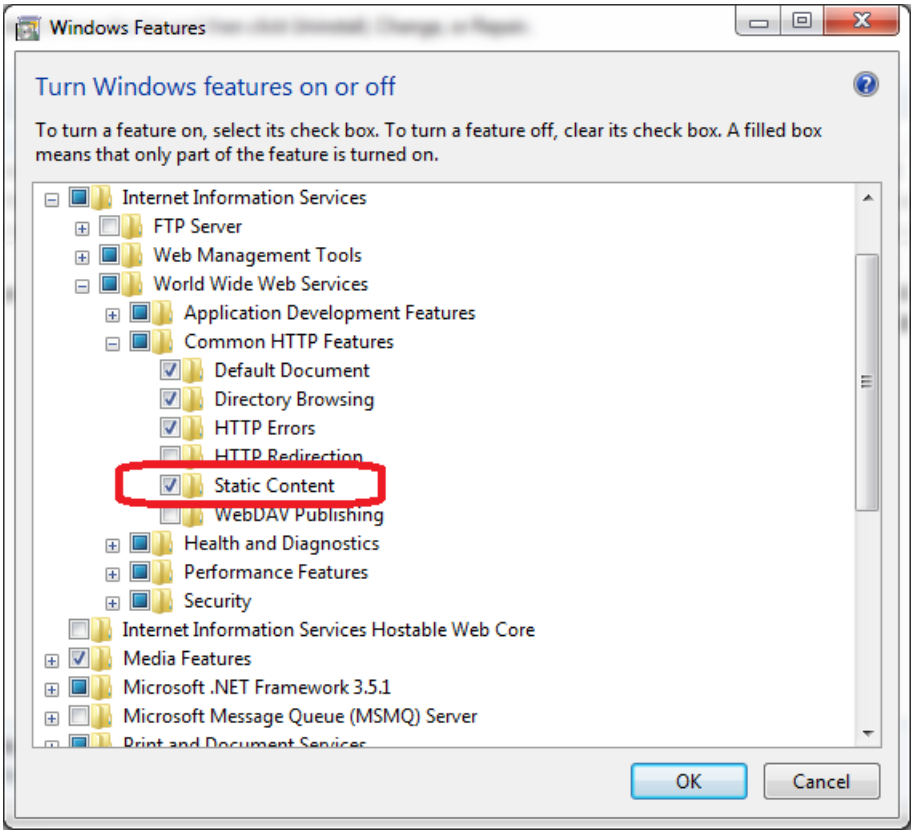
When checking the audit log file look for ERROR or WARNING strings.

23. Event24x7 Web Interface

23.1 Web Interface Requirements

Event24x7 Web Interface requires the following to be installed:

1. IIS - Make sure that "Static Content" is installed



2. Microsoft .NET Framework 4.5
    - http://sdrv.ms/1dPJs5b

3. Web Deploy
    - x86: http://sdrv.ms/1ef3iGq
    - x64: http://sdrv.ms/1dPJc6p

4. MSChart
    - Should be installed on each DES server. (Installation file is located in: Program Files (x86)\Event24x7\Tools\MS Chart Controls\MSChart.exe).

23.2 Web Application Installation

1. Unzip the Web Application package
2. Open CMD as Administrator
3. Change directory to the place where you uncompressed the package.
4. To simulate the deployment and verify that you system is ready
    - ***trigger-{version}.deploy.cmd /T***
5. To deploy
    - ***trigger-{version}.deploy.cmd /Y***

Notice! ***Web Deploy*** must be installed on your computer.
The deployment will create/update web site named ***Event24x7-Web***
For example: ***http://localhost/Event24x7-Web***

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